Introduction …….. 12

Installation

Installing SSDCP …….. 14

Adding SSDCP to the AutoCAD search path…….. 24

Adding SSDCP to the AutoCAD menu by script …….. 29

Manually Adding SSDCP to the AutoCAD menu …….. 31

Uninstalling SSDCP …….. 36

Uninstalling SSDCP license..…….. 38

Moving your SSCP license to another computer …….. 41

Updates ……...44

Buying and installing additional SSDCP modules ……45

Setting Up SSDCP

SSDCP Setup

Using SSDCP setup to start a drawing …….. 49
Prototype Drawings …….. 51
Selecting Drawing Scales …….. 54
Drawing Scales …….. 55
Using DWT Templates …….. 57

SSDCP Utilities
Plot 58
Current drawing info 58
Print total time on drawing 58
Timesheet Program 59
Error Screen ON 62
Error Screen OFF 62

Layer Controls
Change entity to another layer 62
Change current layer to: 62
OBJ
FS
BOR
HL
FSH
LL
CNTR
JOIST

Setup Job Folders
Adding a subfolder..... 62
Renaming a folder 64

Toolbars 69

Customizing Toolbar buttons 70

SSDCP Defined functions 72

Suggestions for using SSDCP 73

Entering Dimensions (imperial) 76

Adding Material to Data Files 78

Selecting Steel Shapes 80

Text Styles 81

Calculating Plotted Text Height 83

Conversion chart for inserting blocks 83

Help 85

Level Beams 87

Columns 90

Beam/Column Add-Ons

Add Beam Pour Stop 104
Add Beam Lintel Plates 108
Add Beam Outriggers 111
Column web safety clip 113
Column web stiffener plates..... 115
Column end prep 116

Other Main Programs

For Erection

Erection/Anchor Bolt Plans 118
Anchor Bolt Settings 120
Anchor Bolt Details 123

Draw Block Wall Sections 126
Draw Brick Wall Sections 132

Sloped or Skewed Beams 137
Sloped Beam (Old)
Sloped Beam (New)
Skewed Beams, plates, layout

Girts/Sag Rods/Lintels 159
Girts
Sag Rods
Lintels
Add Notch or Block

Angle/WT (Horizontal Brace) 176
Horizontal WT Brace
Horizontal Angle Brace
Horizontal Brace Plates
Horizontal Double Angles (similar to WT)

Angle/WT/Knee Brace (Vertical Brace) 184
Vertical WT Brace
Brace Plate for Vertical WT Brace
Vertical Angle Brace for Single Gage
Brace Plate for Vertical Angle Brace (single gage)
Vertical Angle Brace for Double Gage
Brace Plate for Vertical Angle Brace (double gage)
Knee Brace

TS/Pipe Vertical Bracing 194
TS/Pipe Field Welded
Brace Plate for TS/Pipe (Field Weld)
TS/Pipe Field Bolted

Wide Flange Vertical Brace 210
Bolt Flange Web/Angles
Brace Plate for Bolt Flange Web/Angles
Bolt Web Only
Brace Plate for Bolt Web
Bolt Flange Web/Weld Plates
Brace Plate for Bolt Flange Web/Weld Plates
Bolt Web Only/Plates Web View
Brace Plate for Bolt Web Only/Plates Web View

Horizontal Brace Struts 241
Angle Struts
WT Struts

Miscellaneous Bracing Programs 245
Quick Check
Odd Bracing Angle
Generic Brace Plates

Stair Programs 247
Pan (Sloping Riser)
Pan (30 degree Bullnose)
Pan (Straight Riser)
Pan (Landing Details)
Grating Treads Bolted
Grating Treads Welded
Checkered Plate Treads
Stair Bracing

Stair Handrail 274
Wall Rail
Single Mid-Rail
Multi Mid-Rail

Level Handrail 287
Pipe
Handrail Panels
Angle N/A

Truss Work 298
Welded Angles
Bolted Angles
Welded Pipe
Welded Truss
Pipe Intersection

Hoppers/Plate Work 310

Miscellaneous Programs 316
Plate Girder Section
Checkered Floor Plate Plan
Add Notch or Block
Tilt Up Panels

Full Size Templates 323
For Base Plate
For Brace Plate
Wrap Around Plate

Draw Steel Shapes

Front Views 326
Stick of Steel
Continuous Angle or Bent Plate
Section Views 326

Pipe Shape
TS / HSS Shape
Hatch Sections
Section Thru Bent Plate
AISC Shape Information 328
Draw Joist / Girders 329

BOM / Material Marking 336
BOM Setup / Sheet Layout
Add a Shipping Mark
Add an Assembly Mark
Add Material Label on Detail
Fill In Bill of Material

Weld Symbols 346

Print or Count Bolts 348

Forms, Cut Section Arrows, Hatch Patterns 348
Create any Form
Cut Section Arrows
Standard Hatch Patterns
Steel
Concrete
Wall 1/8" Scale
Wall 1" Scale
Grating-Bearing Bars Horizontal
Grating-Bearing Bars Vertical
Checkered Plate

SSDCP Library 349
Insert / Add / Modify Blocks

Draw Miscellaneous Angles / Plates 354
Clip Angle
Any Plain Plate
Base Plate Plan
Base Plate Elevation
Cap Plate Elevation
Corner Base Plate
Dimension Any Plate
Shear Bars

Draw Miscellaneous Details 360
Beam Outrigger Detail
4-Sided Frames
Roof Frames
Anchor Bolt Details
Draw Box
Draw Cloud
Draw Arcs with Dimensions
Draw Shims
Draw Studs
Draw Expansion Bolts
Blow Up Detail
Camber Diagram

Draw Miscellaneous Holes 369
Round Hole
Slots
Flange Hole
Add Holes to Details
Draw Bolt Circle

Text (Change or Edit) 371
Change Text

Text on Arc
Blow Up Text to Read

Cross Hair Angle 371
Reset to 0 –90
Set Angle

Leaders for Holes or Text 372

Bevels / Lines 372
Draw Bevel Figure
Rotate to Bevel
Draw Sloping Line
Trim Multi Lines
Extend Multi Lines
Hump Over Line
Break Material
Break Short Line
Change Pline Width

Calculator 373
Triangles
Multiply
Divide
Add/Subtract
Circles
Divide Line
Super Add
Add Real Numbers
Weld Loads
Length Sloping Stiffener
Conversions
D/M/S to Decimal Degree

Metrics

Reset / Convert / Find 374
Reset SSDCP Layers and Dimvars
Convert CVSpro Drawings
Convert SDS 2 Drawings
Find a File

SSDCP Manual

SSDCP Manual

INTRODUCTION

Congratulations on your purchase of SSDCP. This manual is intended to give you overviews of the various routines included in your selected package. This manual includes information on the complete SSDCP package, so there may be information on modules you did not purchase and were not a part of your purchase. Please use this manual as a guide to help you, but nothing replaces actually trying a routine to see what your options may be. The depth of SSDCP makes it impossible to cover each and every question presented in each routine. A reminder that the online help system within SSDCP contains the same information found within this manual.


Installation

SSDCP Manual

Installing SSDCP

These Installation instructions will lead you through the process of installing SSDCP from scratch (onto a computer where SSDCP has never been installed before). It will also show you how to make the necessary settings in AutoCAD. Consult your user manual for uninstalling, updating, moving your license to a different computer, etc. An SSDCP system consists of two parts – the SSDCP "license" and the actual programs themselves.

Your installation materials consist of a set of two pieces:

1. An SSDCP Installation CD + SSDCP License (on 3.5" Diskette) … or …
2. An SSDCP Installation CD + SSDCP License (on a USB Flash Drive)

These two are a set and you should keep them together. When you install, uninstall, or do any other task that involves the SSDCP installation media, they are both inserted at the same time starting with the License media (the diskette or Flash Drive).

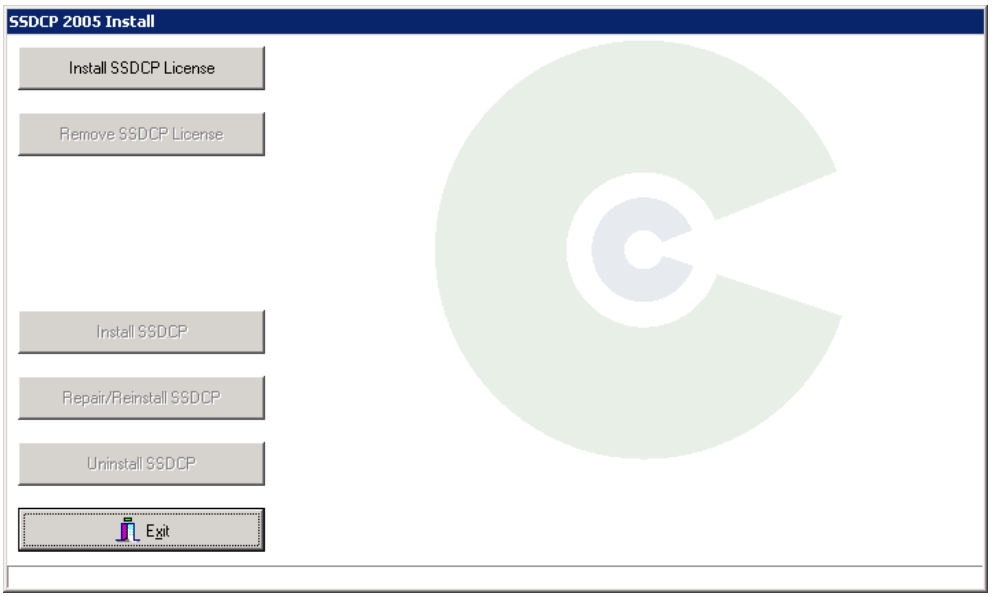
The 'license' is in essence a security system that prevents you from installing SSDCP on more than one computer at a time. If you wish to use SSDCP on more than one computer, you need a Starter Modules (licenses) for each machine. You can move your license from one computer to another, but can only be on one at a time (See the manual section for transferring your license).

These two parts of SSDCP are installed in two steps: first the License, them SSDCP itself (the programs). These steps are both done from the same screen.

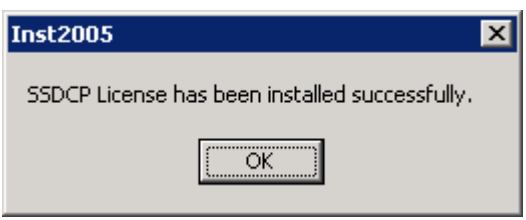
PLEASE NOTE: Using SSDCP requires the user to have FULL ADMINISTRATIVE RIGHTS on his or her PC. Please be certain you have Administrative rights before attempting to install or use SSDCP.

STEP 1 - Installing the SSDCP License

Insert the License media and the Installation CD. When you do that, the screen below will come up.
Click on "**Install SSDCP License**".

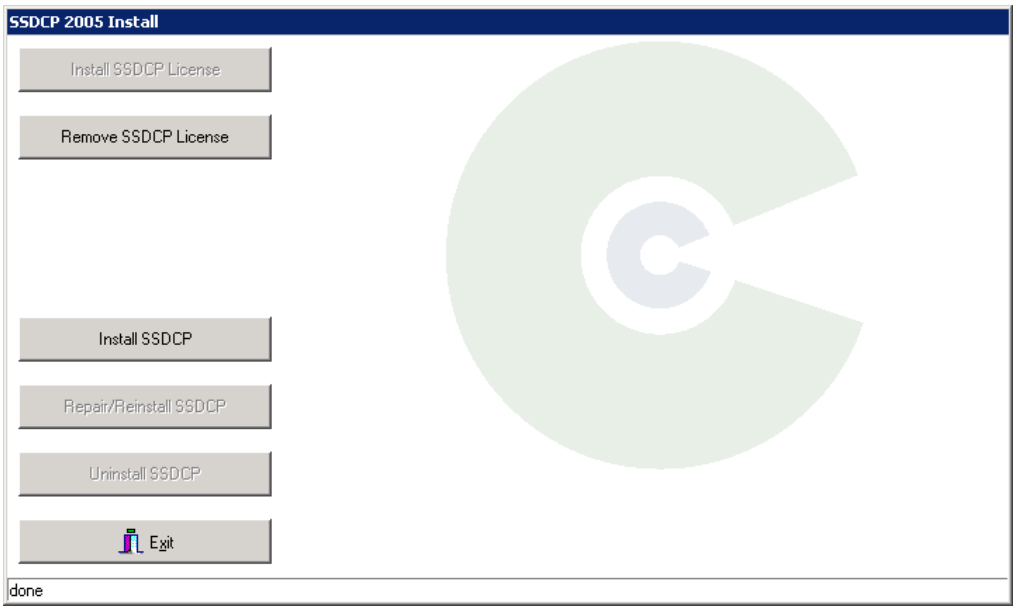


If the license installs successfully, you will see this message box:



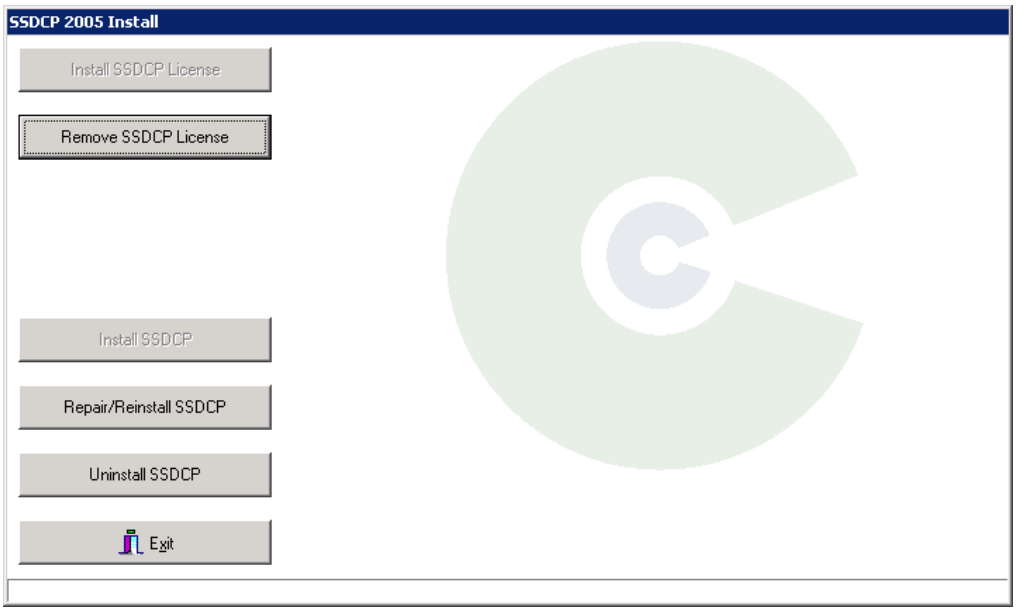
STEP 2 - Installing SSDCP (the programs)

Once the SSDCP license is installed in your computer, the installation program will allow you to proceed to step 2 - where you will install the actual SSDCP programs in your computer. The installation screen should now look like this:



1) Click on the "**Install SSDCP**" button. This will launch the Installer wizard.
2) When the Installer Wizard is done, click on the "**Finish**" button to close it. Now **wait a few seconds** while the Install Interface refreshes the screen and cleans up all the temporary files it created during the installation process. **Be patient and wait for the screen to look like it does below!!**

When the Install wizard is finished, the screen should look like this:



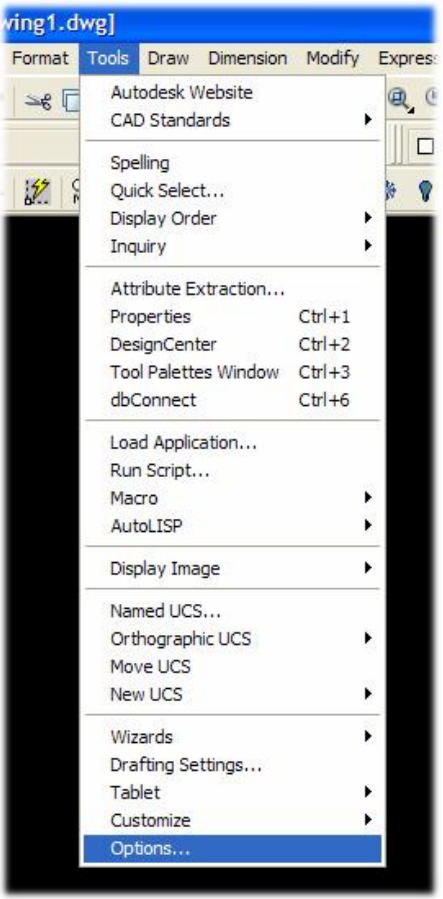
3) Now Click "**Exit**" at the bottom of the screen. The installation portion is complete. You must now make a couple changes inside AutoCAD so that it works with SSDCP.

Making the necessary AutoCAD Settings

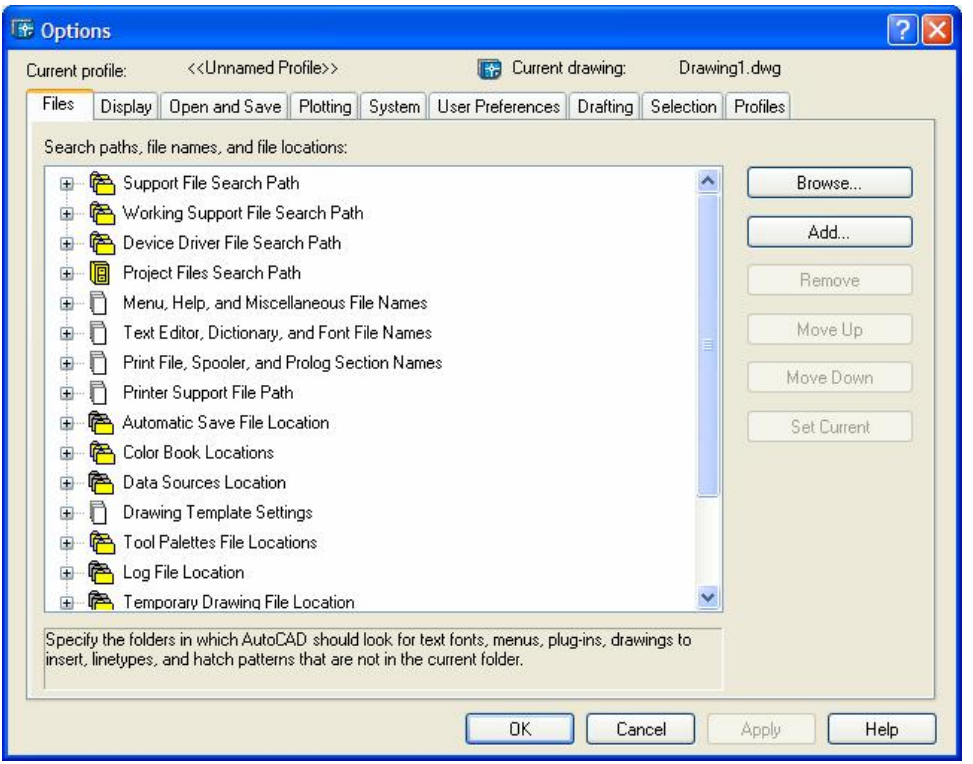
There are 2 tasks you must do inside of AutoCAD. These two tasks MUST be done in the order shown below.

ACAD Settings step #1 - Adding SSDCP to AutoCAD's Search Path

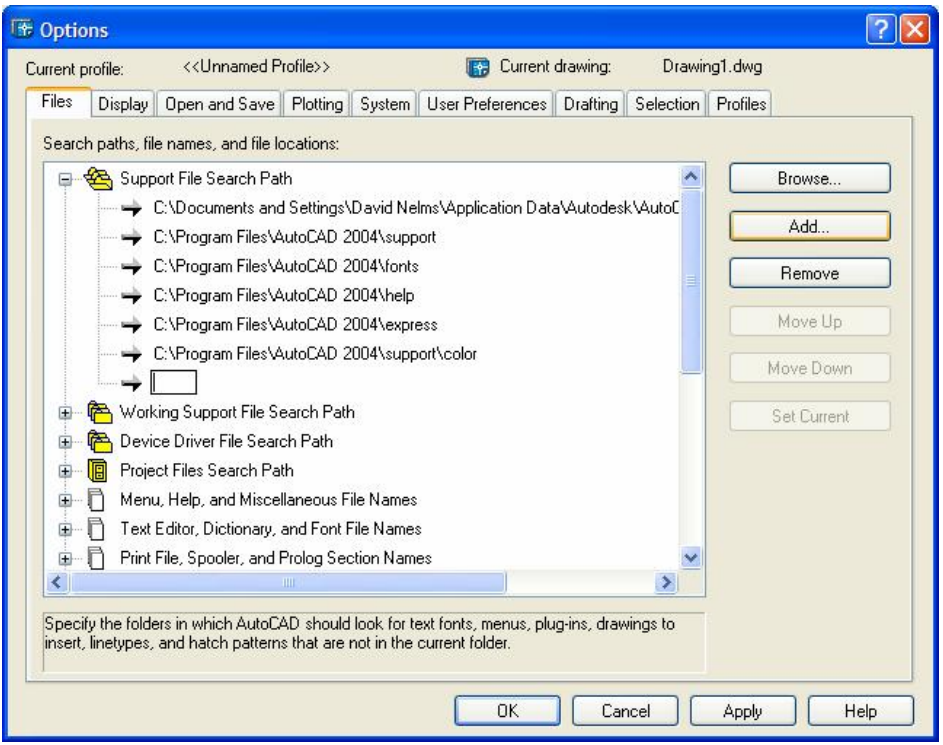
1) Start AutoCAD, and from the ACAD menu choose **Tools, then Options.**



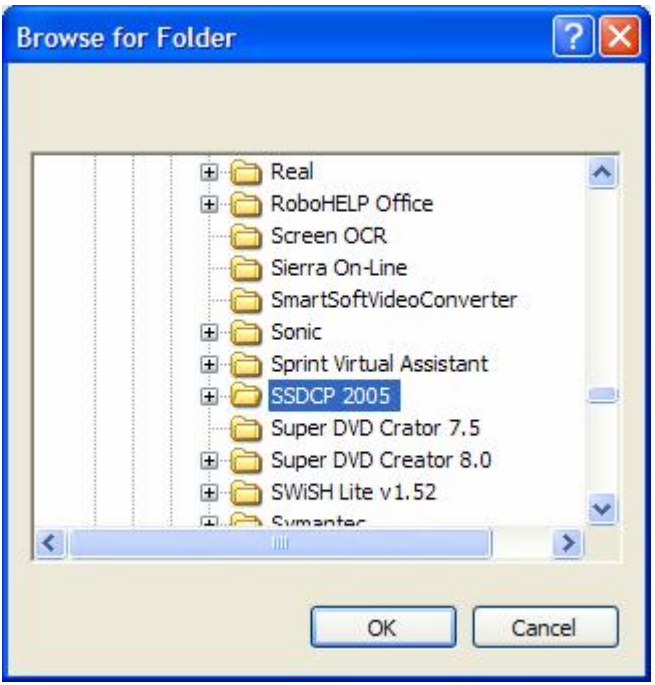
2) On the **“Options”** screen, select the **“Files”** tab.



3) Click on the **"+"** next to **"Support File Search Path"** to expand the list of folders already done.
4) Click the **"Add"** button to the right side of the screen.

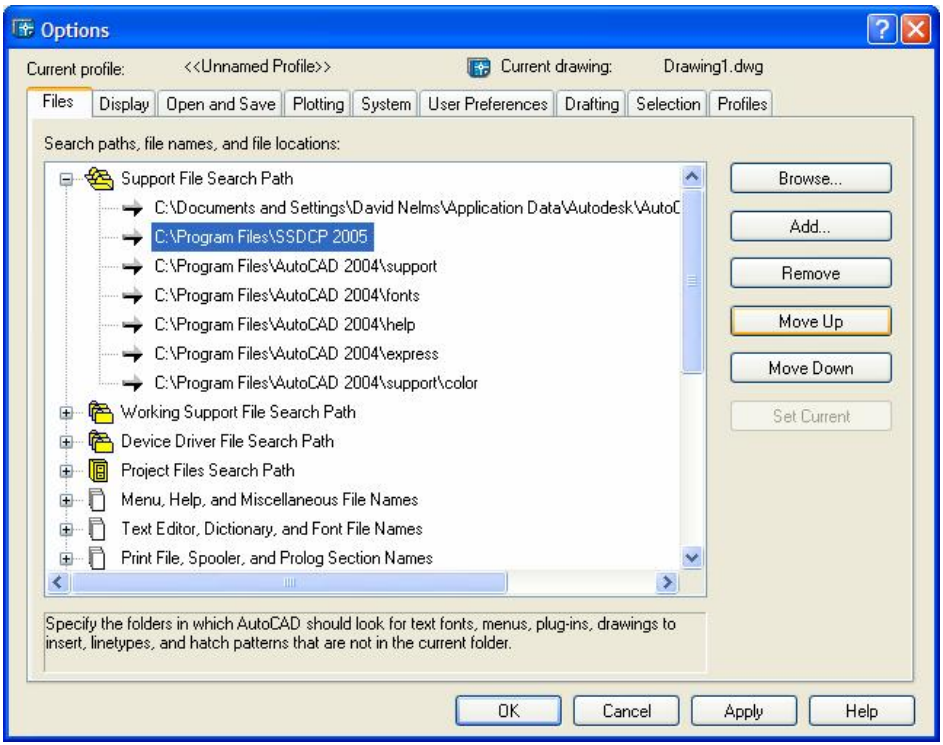


5) Click on the "**Browse**" button to the right side of the screen (above Add) to bring up the **"Browse for Folder"** dialog box, and select then SSDCP folder (located underneath **C:\Program Files)**



6) Click the **"OK" button**. This will close the **"Browse for Folder"** dialog and return you to the **"Options"** dialog showing SSDCP as being the last entry in the list of search path folders.

7) Click onto the **"Move Up"** button (on the right side of the screen) until SSDCP is located just above the AutoCAD **"Support"** folder (see below).
8) Click the OK button at the bottom.

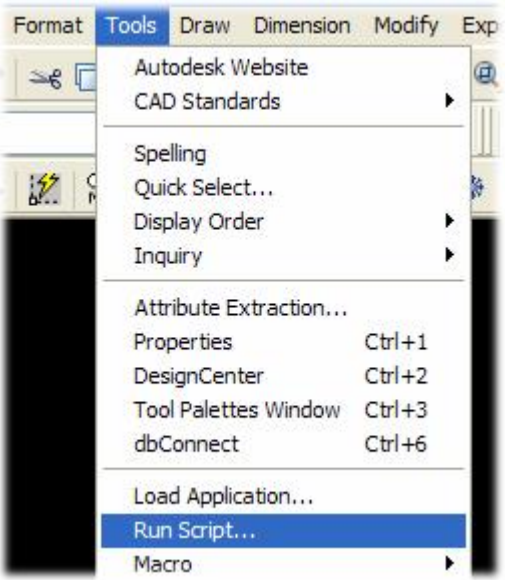


9) If you are using Windows 98 or ME or AutoCAD R14, you must close AutoCAD and restart your computer now. For Windows 2000 or XP, restarting the computer is probably not necessary, but it couldn't hurt.

ACAD settings step #2 - Adding SSDCP to the AutoCAD menu

Once SSDCP has been added to the ACAD search path, you can run the script that will insert SSDCP into the menu.

1) From the main ACAD menu choose "**Tools**" then "**Run Script"**



2) When the "Select Script" screen below appears, browse to the SSDCP folder (c:\Program Files\SSDCP). Select the "**Menuload**" script file form the list. The script name should be "Menuload" followed by the AutoCAD version you specified for your install. I.e., the script for AutoCAD 2000 is called "**Menuload2000.scr**" while AutoCAD 2005 is "**Menuload2005.scr**".

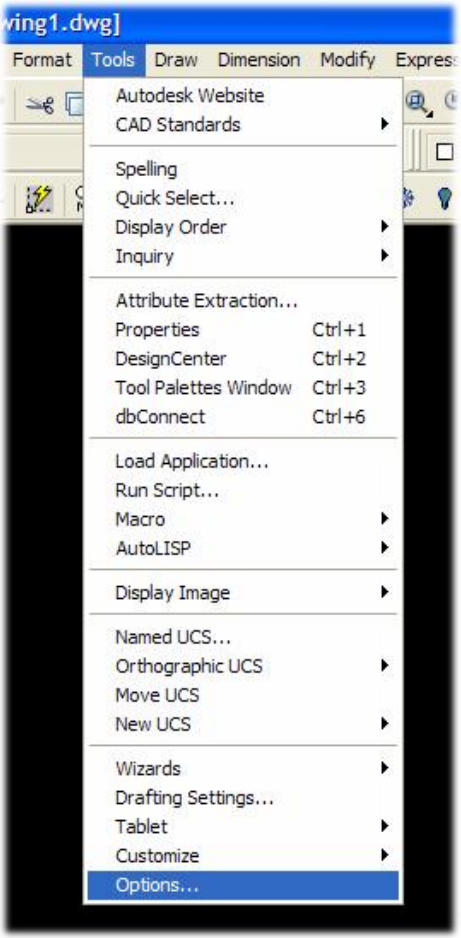


3) Click on the "Open" button to start the script.
4) After Menuload has completed, CLOSE and EXIT AutoCAD before you do anything else.
5) Restart AutoCAD.

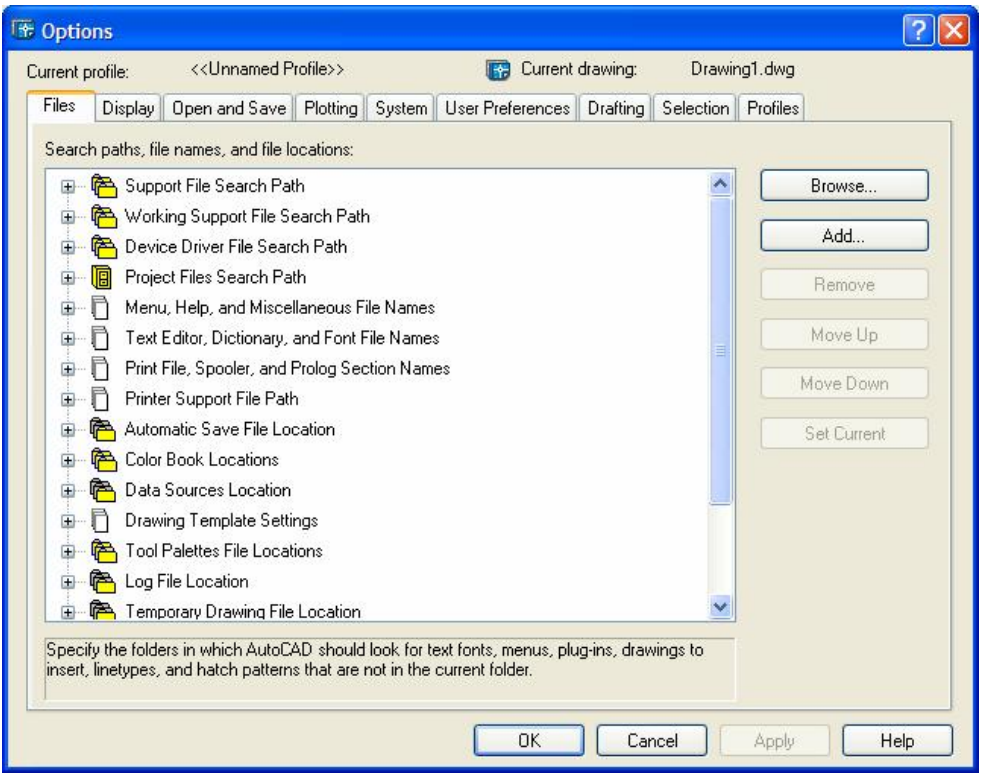
THAT'S IT !! You should now be ready to start using SSDCP. Good Luck.

Adding SSDCP to the AutoCAD search path

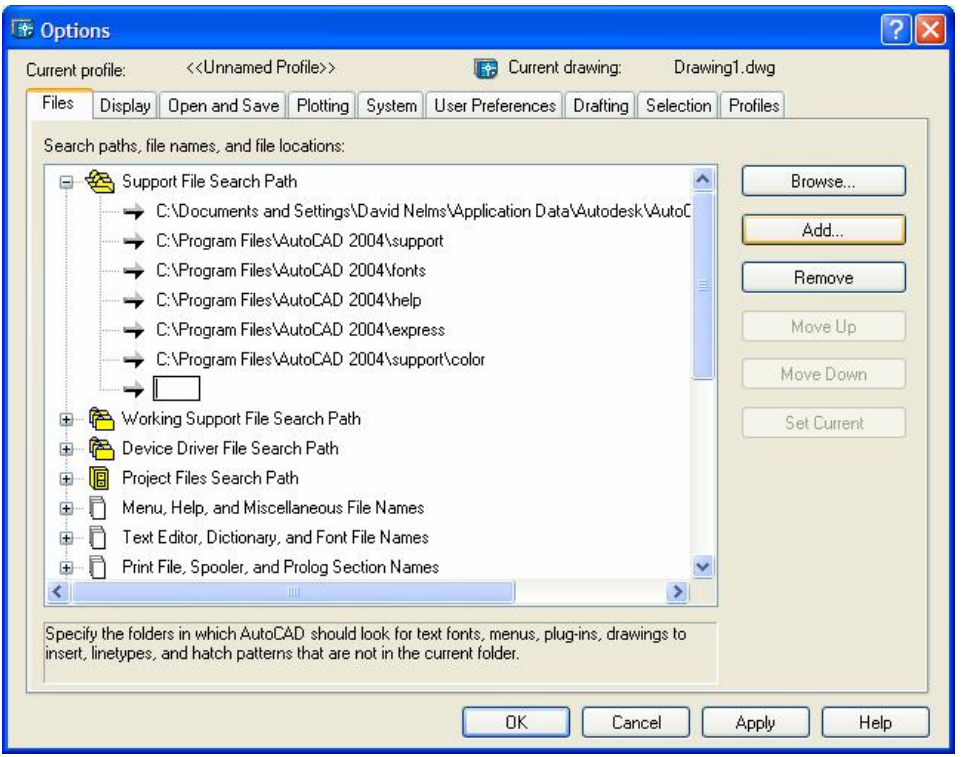
1) Start AutoCAD, and from the ACAD menus choose **Tools, then Options.**



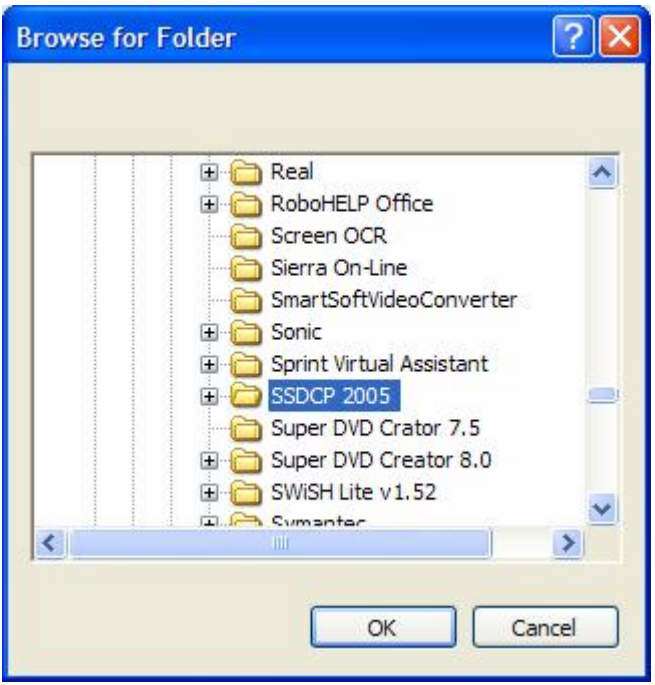
2) On the **“Options”** screen, select the **“Files”** tab.



6) Click on the **"+"** next to **"Support File Search Path"** to expand the list of folders already done.
7) Click the **"Add"** button to the right side of the screen.

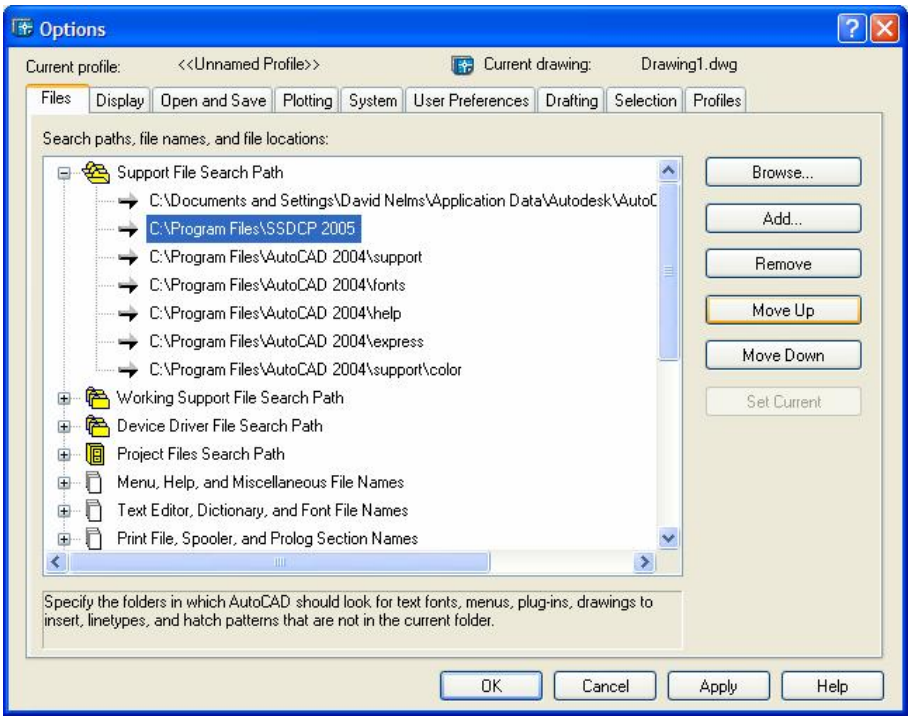


8) Click on the "**Browse**" button to the right side of the screen (above Add) to bring up the **"Browse for Folder"** dialog box, and select then SSDCP folder (located underneath **C:\Program Files)**



6) Click the **"OK" button**. This will close the **"Browse for Folder"** dialog and return you to the **"Options"** dialog showing SSDCP as being the last entry in the list of search path folders.

10) Click onto the **"Move Up"** button (on the right side of the screen) until SSDCP is located just above the AutoCAD **"Support"** folder (see below).
11) Click the OK button at the bottom.

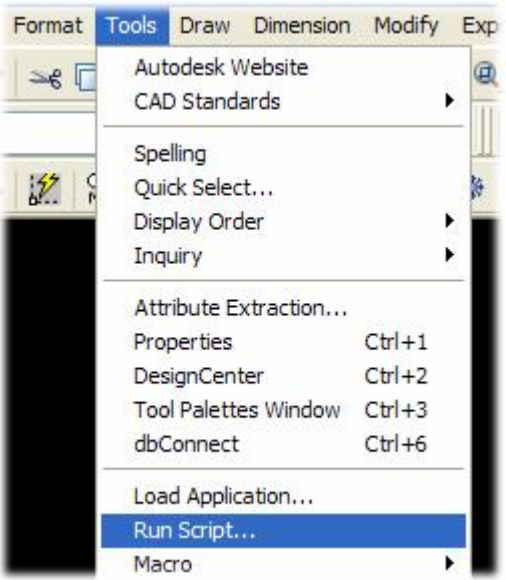


12) If you are using Windows 98 or ME or AutoCAD R14, you must close AutoCAD and restart your computer now. For Windows 2000 or XP, restarting the computer is probably not necessary, but it couldn't hurt.

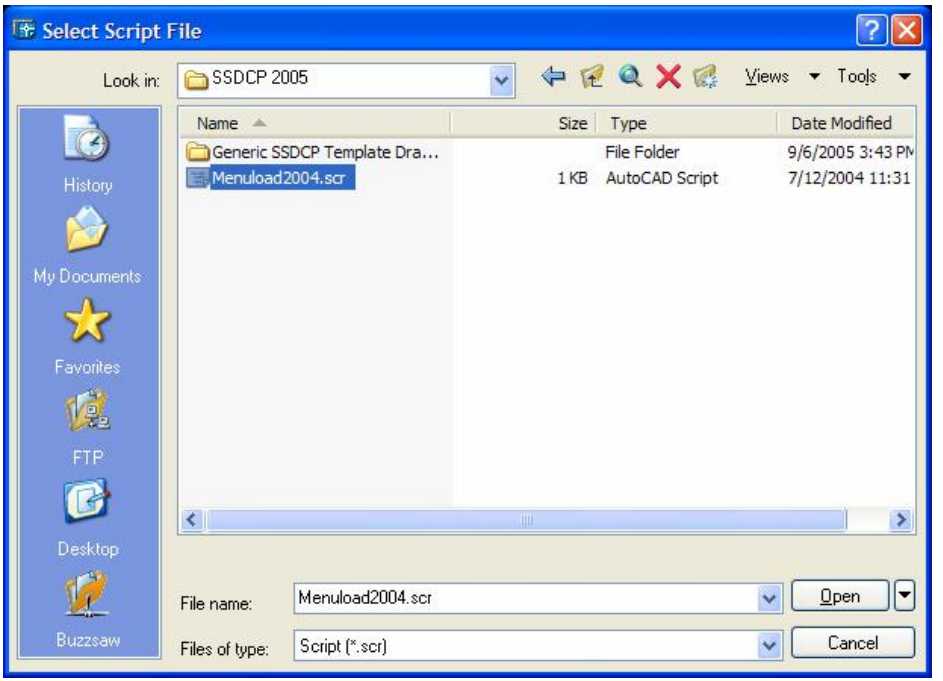
Adding SSDCP to the AutoCAD menu by Script

1) Once SSDCP has been added to the ACAD search path, you can run the script that will insert SSDCP into the menu.

2) From the main ACAD menu choose "**Tools**" then "**Run Script"**



3) When the "Select Script" screen below appears, browse to the SSDCP folder (c:\Program Files\SSDCP). Select the "**Menuload**" script file form the list. The script name should be "Menuload" followed by the AutoCAD version you specified for your install. I.e., the script for AutoCAD 2000 is called "**Menuload2000.scr**" while AutoCAD 2005 is "**Menuload2005.scr**".

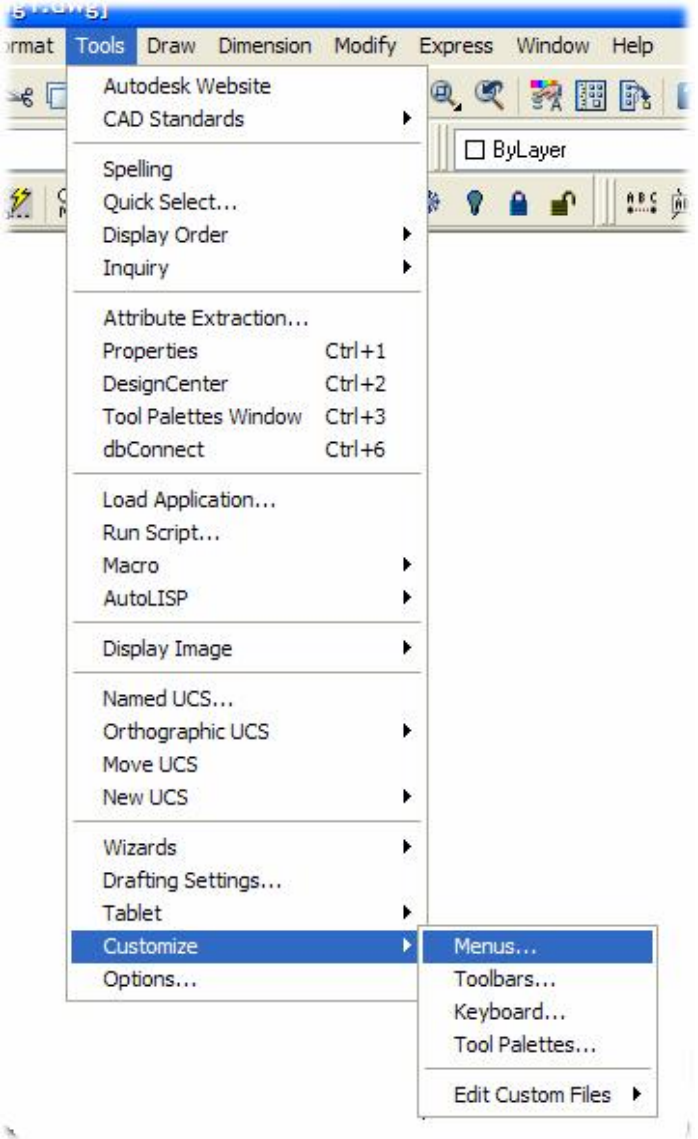


4) Click on the **"Open"** button to start the script.
5) After Menuload has completed, CLOSE and EXIT AutoCAD before you do anything else.
6) Restart AutoCAD.

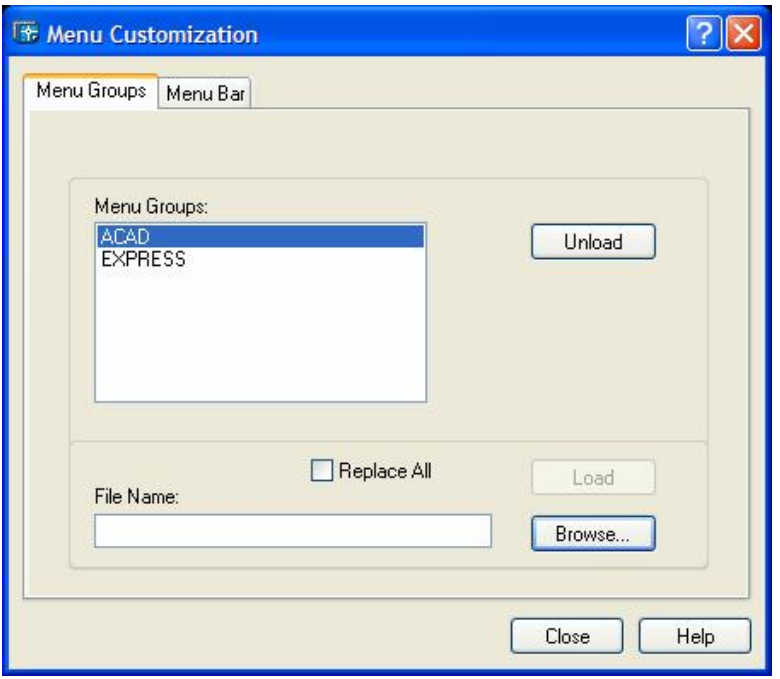
Manually Adding SSDCP to the AutoCAD menu

These steps assume that SSDCP has been installed and was already added to the AutoCAD search path.

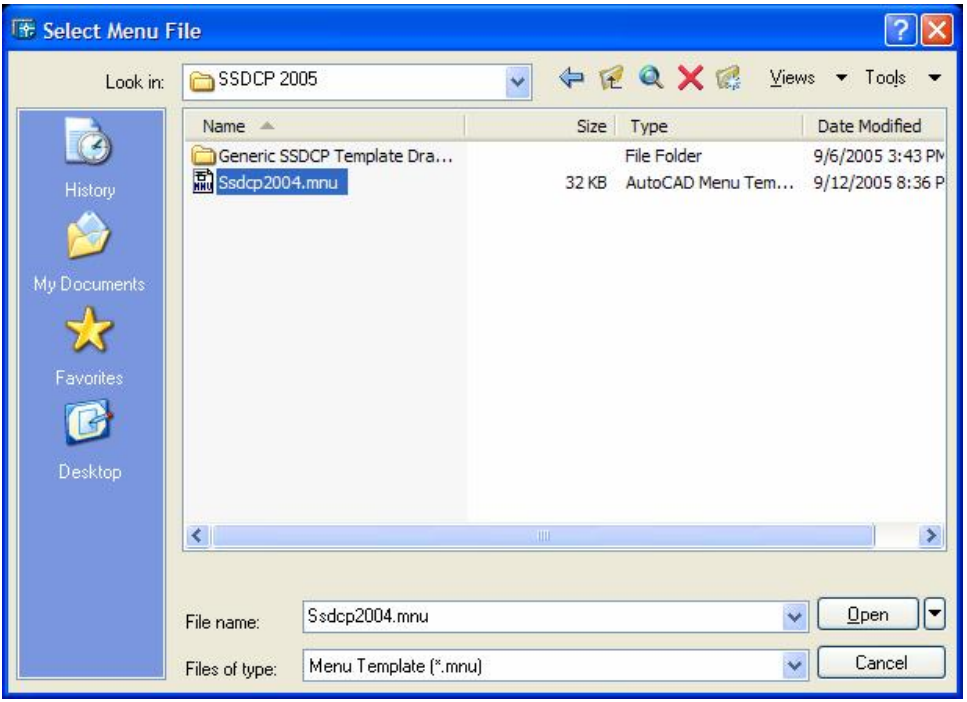
1) Start AutoCAD and select **"Tools"**, then **"Customize"** and then **"Menus".**


rmat
Tools
Draw
Dimension
Modify
Express
Window
Help
Autodesk Website
CAD Standards
Spelling
Quick Select...
Display Order
Inquiry
Attribute Extraction...
Properties Ctrl+1
DesignCenter Ctrl+2
Tool Palettes Window Ctrl+3
dbConnect Ctrl+6
Load Application...
Run Script...
Macro
AutoLISP
Display Image
Named UCS...
Orthographic UCS
Move UCS
New UCS
Wizards
Drafting Settings...
Tablet
Customize
Options...
Menus...
Toolbars...
Keyboard...
Tool Palettes...
Edit Custom Files
ByLayer

SSDCP Manual



3) Click "**Browse**" to bring up the "**Select Menu File**" screen.

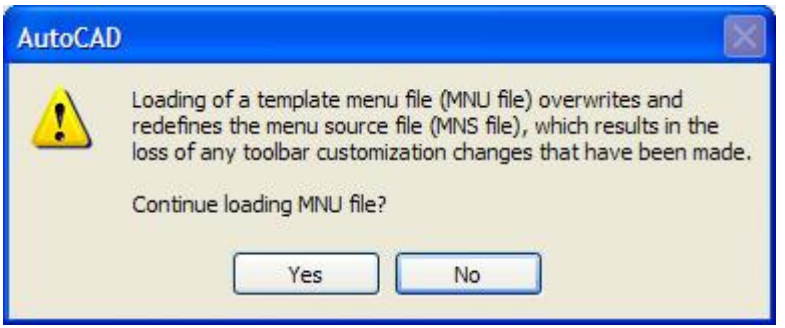


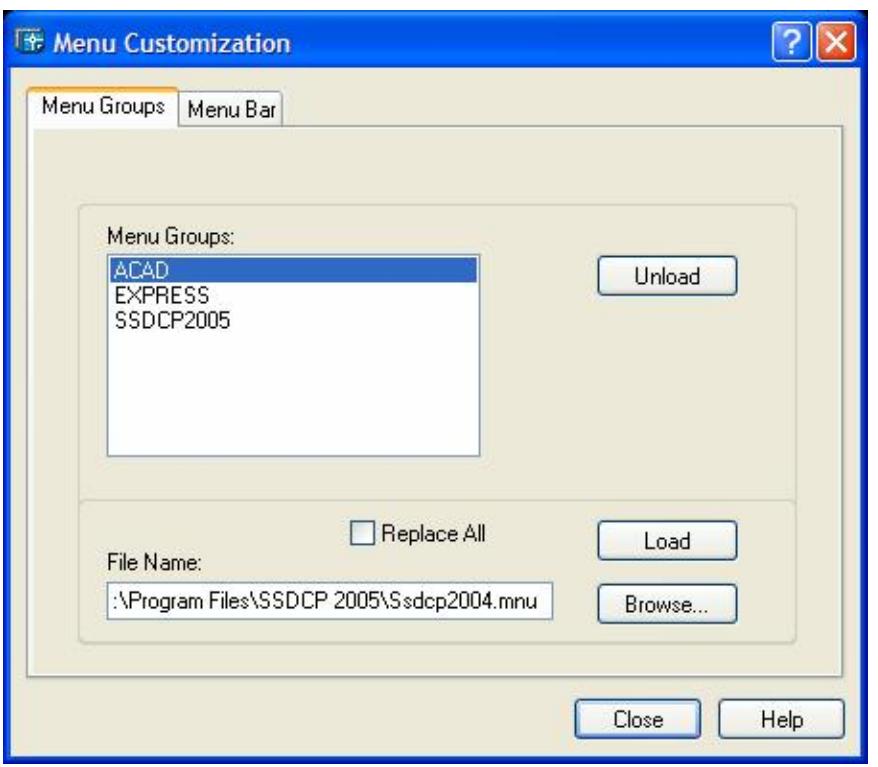
NOTE: At the bottom of the screen above, make sure that "is showing in the box labeled **"Files of type"**. If it is not, open that list box by clicking the arrow and picking **Menu Template (.MNU)**" from the list.

4) Assuming the Menu File screen is displaying .MNU files (see above note), you should see an MNU file listed in the large white area of the screen. The file name will correspond with the version of ACAD you are using. For example, above you see the **SSDCP2004.mnu** meaning this install is for AutoCAD R2004.

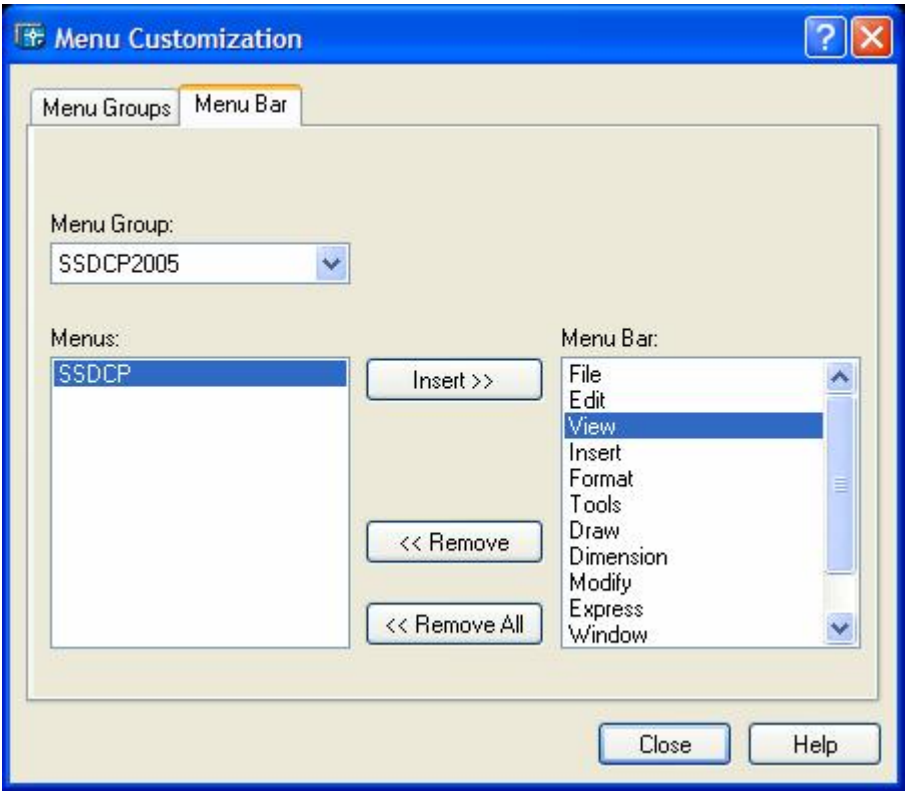
5) Click onto the .MNU file, then click "**Open**". This will start to install the SSDCP menu group.

SSDCP Manual


AutoCAD
Loading of a template menu file (MNU file) overwrites and redefines the menu source file (MNS file), which results in the loss of any toolbar customization changes that have been made.
Continue loading MNU file?
Yes
No



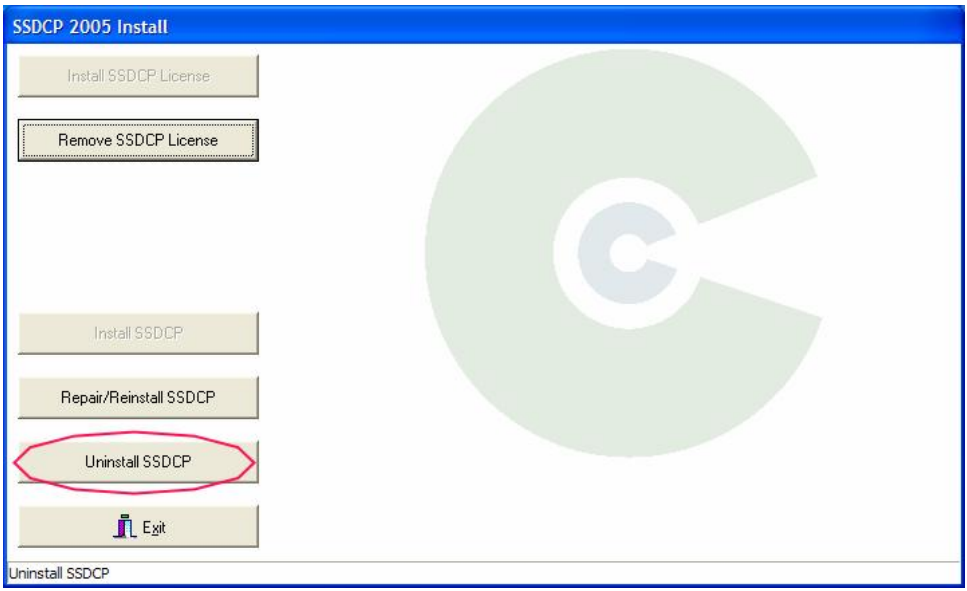
VIEW, and then click the **INSERT** BUTTON (at top, in the middle). This will add SSDCP into the Menu Bar list shown on the right.



8) Press the "**Close"** Button at the bottom of the screen.
9) **Exit AutoCAD before you do anything else.**
10) Now Restart AutoCAD. SSDCP should appear as the 3rd option in the ACAD menu.

Uninstalling SSDCP

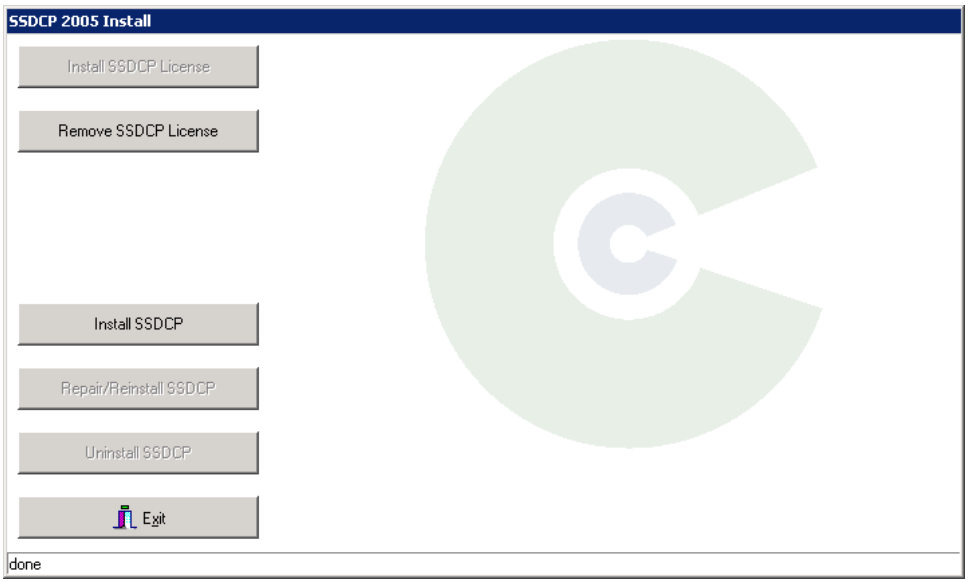
NOTE: You do not need to put your SSDCP License medium in the computer in order to uninstall SSDCP since it is already in your computer.



2) Click on the "**Uninstall SSDCP**" button. This will launch the Installer Wizard and after several flashing screens display the confirmation screen (be patient):



3) Click Yes to continue.



5) Click "**Exit**" on the Install program and remove the CD from your CD drive.

6) You have now uninstalled SSDCP (the actual programs) from your machine.

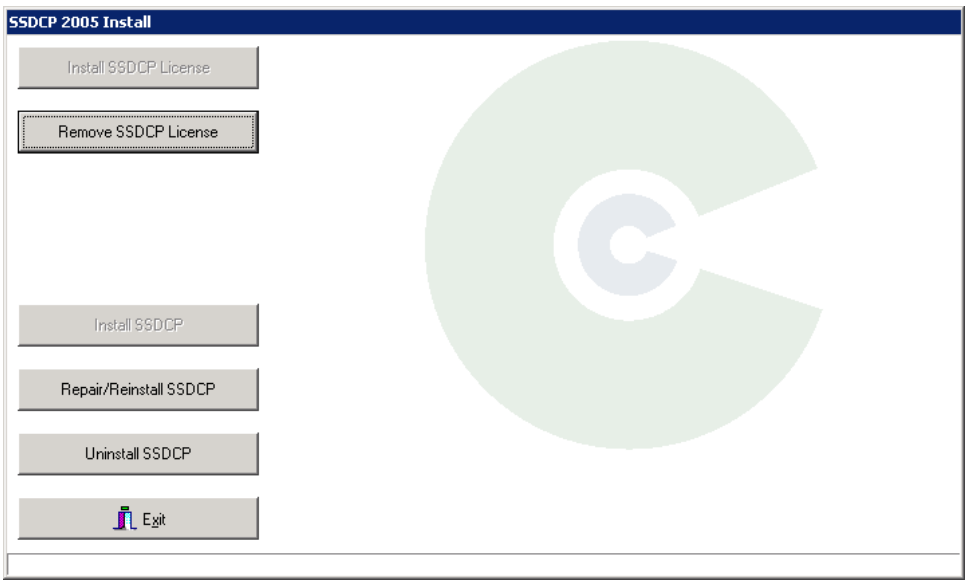
NOTE: The SSDCP license is still installed in your machine. That means you can re-install SSDCP without having to do the process of "Installing the SSDCP License" again. Should you want to remove your license now, refer to the instructions on Uninstalling the SSDCP License.

Uninstalling your SSDCP license

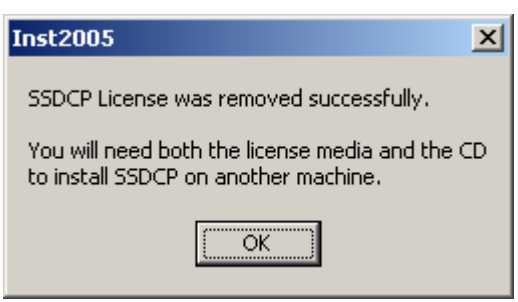
An SSDCP license can be removed from one computer in order to transfer it to another machine where you want to install SSDCP or have previously installed SSDCP. Removing the license will render SSDCP unusable until the license is reinstalled.

1) Plug in the removable license media (diskette, USB Flash Drive, Flash Card, etc) you want to hold your SSDCP license. The media or drive must be empty and

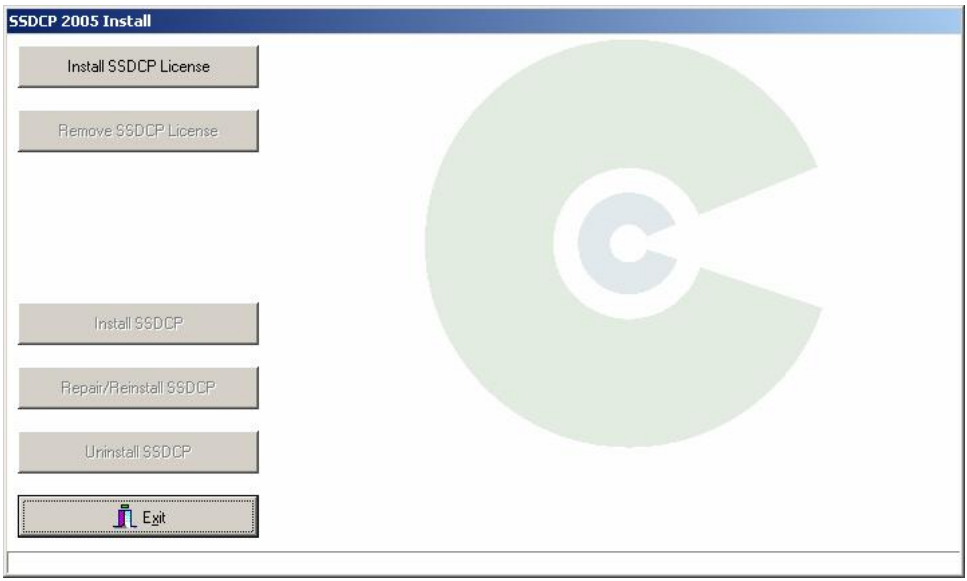
2) Put the **SSDCP Install** CD in the CD drive now. When the Install Program comes up, it should have the "Remove SSDCP License" button enabled (see below). On the screen shown below, both the "SSDCP License" and the "Install SSDCP" buttons are grayed out - indicating that both are currently installed. The install program reads your SSDCP system to check its state of installation. The Installer Program only offers valid choices.



3) NOW … Click on "**Remove SSDCP License**". If the license is transferred successfully, you should see a message that looks like this:


Inst2005
SSDCP License was removed successfully.
You will need both the license media and the CD to install SSDCP on another machine.
OK

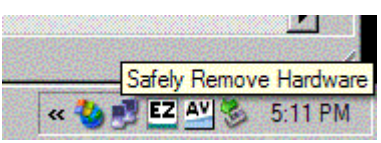
4) The Install program screen should now look like this:



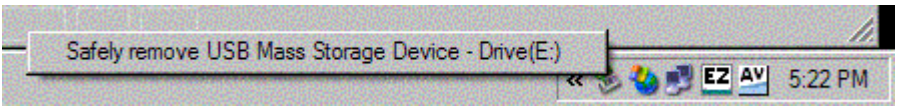
5) Click on the "**Exit**" button. This will close the Install interface.

FOR FLASH DRIVES

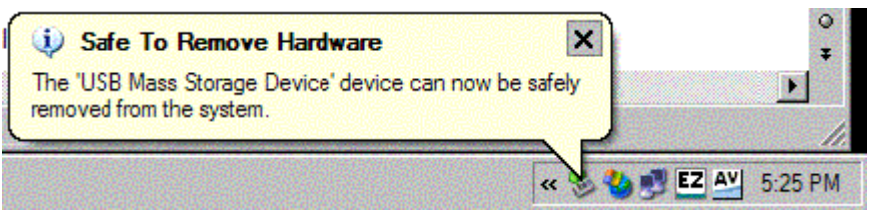
For solid state drives such as USB Flash Drives, Flash Cards, Zip drives, etc., it is recommended that the device be "**prepared for removal**" before removing or unplugging it from your computer. This can be done by finding the icon in the system tray with the popup label "**Safely Remove Hardware**" and clicking on it with the left mouse button.



This will bring up a small popup window that you click on to prepare the drive for safe



When the following message appears it is safe to remove your drive, which now contains your SSDCP license.



The SSDCP license is now located on the removable medium and is free to be installed onto another computer. Or back onto this one.
LAST STEP: Remember to remove the SSDCP Install CD from the CD drive..

Moving your SSCP license to another computer

1) Your SSDCP license media may be either a floppy disk, or a USB “thumb” drive. Insert your floppy disk in the floppy drive, or if applicable, attach your USB drive.
2) Insert your SSDCP install CD.
3) The SSDCP installer will launch automatically and you will see a welcome screen like this:



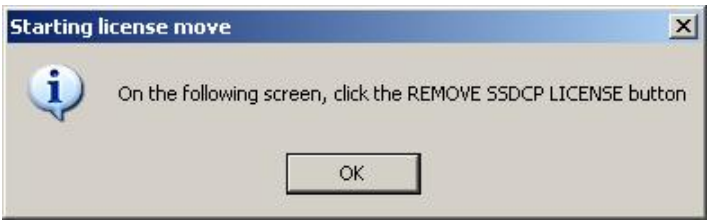
4) If the installer program does not launch automatically, use Windows explorer to browse the contents of the SSDCP CD and double click the SSDCP icon for "Launcher" to start the process.
5) You will be asked if you want to move your license:



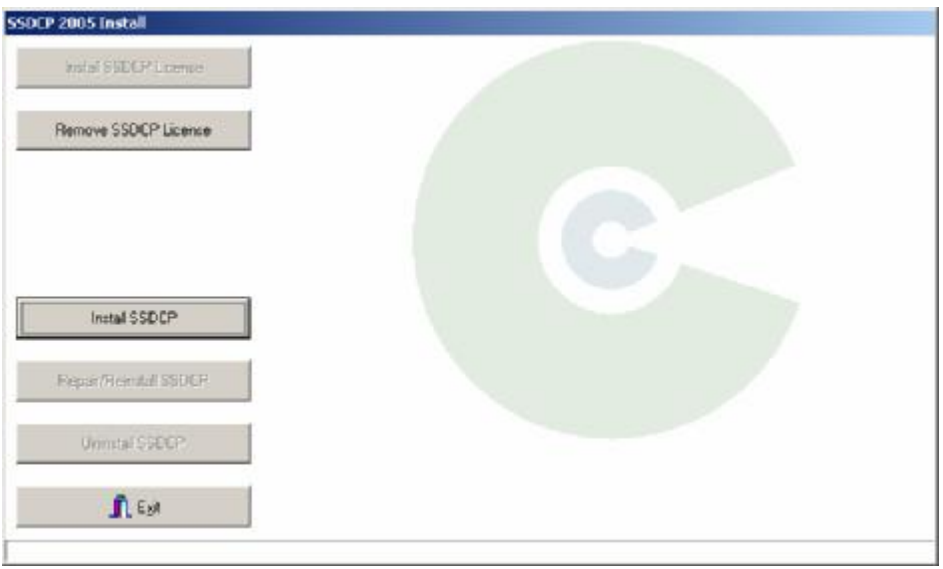
6) Click YES.
7) You will be reminded to make sure your license media has been inserted/attached:



8) Once you verify your SSDCP license media is attached, click the “OK” button.
9) Once the necessary files are created and moved, you will see the following message:



10) Click the “OK” button to continue. You will then see the license install & removal program:



11) Click the “Remove SSDCP License” button to automatically copy and save your license to the license media.
12) Once the license has been removed, you will see the following message:


Inst2005
SSDCP License was removed successfully.
You will need both the license media and the CD to install SSDCP on another machine.
OK

13) Click the “OK” button.
14) Click “EXIT” on the license removal program

You may now remove the license media and the SSDCP install CD. Follow the instructions for **Installing SSDCP** to install on another PC.

Updates

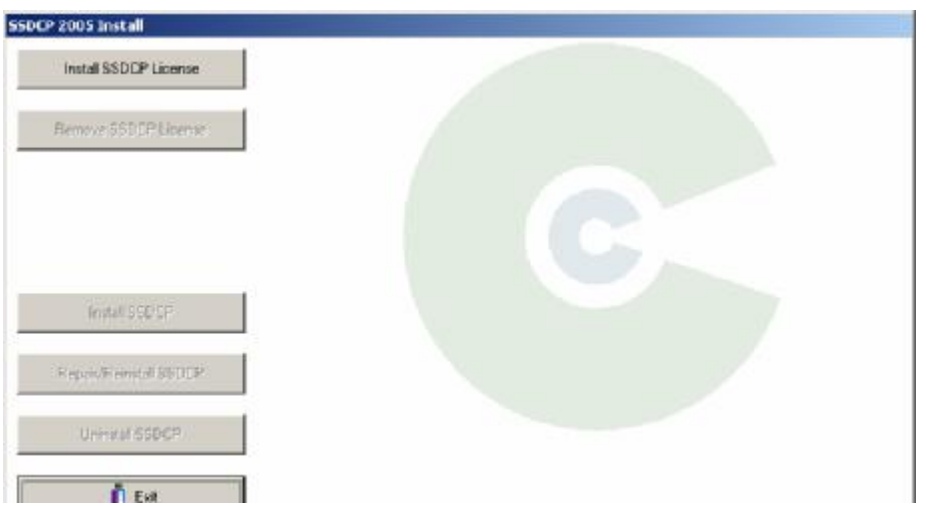
1) Remove the following files from your ACAD folder (note: not all of these files may exist in your machine). It is suggested that the files be moved to a diskette or other removable media & then discarded after the 2005 update is installed:
    a. ACAD.LSP
    b. SETUP.LSP
    c. SSDCP.MNU
    d. SSDCP.MNL
    e. SSDCP.MNC
    f. SSDCP.MNS
    g. SSDCP.MNR
    h. Any other files that contain SSDCP in their name.

2) Insert your update license media (floppy or USB drive) & SSDCP install CD.

3) The SSDCP installer will launch automatically and you will see a welcome screen like this:



4) If the installer program does not launch automatically, use Windows explorer to browse the contents of the SSDCP CD and double click the SSDCP icon for "Launcher" to start the process.
5) You will then see the license installer program start:



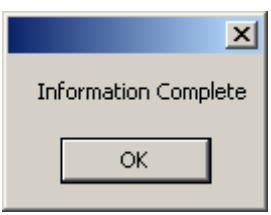
BUYING AND INSTALLING ADDITIONAL SSDCP MODULES

You may purchase additional SSDCP modules at any time and add them to your existing SSDCP modules. To purchase additional modules, simply call SSDCP and place your order!

SSDCP will send an executable file via email, or if you chose, via regular postal service mail.

Once you have the executable file (named either “FeatureInstaller2005” or “FeatureInstaller2005.exe”).

1) Simply double click the icon for the executable file. You will see the following message once the program successfully runs:



2) Click the “OK” button to exit.
3) Insert your SSDCP install CD.
4) The SSDCP installer will launch automatically and you will see a welcome screen like this:



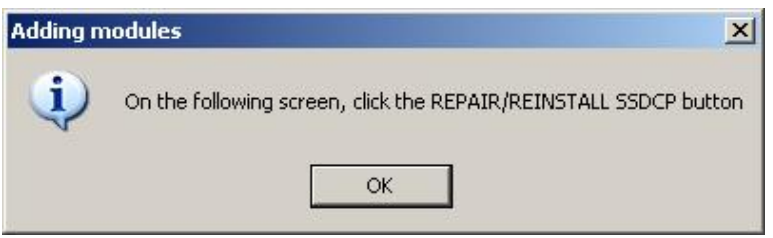
5) If the installer program does not launch automatically, use Windows explorer to browse the contents of the SSDCP CD and double click the SSDCP icon for "Launcher" to start the process.
6) Once the installer program starts, it will determine your current SSDCP configuration, then prompt you with the following:



7) Click "NO"
8) You will then see the following message:



9) Click “Yes”
10) You will see the following:



11) Click “OK” to launch the SSDCP module installer program
12) Click the “REPAIR/REINSTALL SSDCP” button to automatically add the new modules to your SSDCP station.

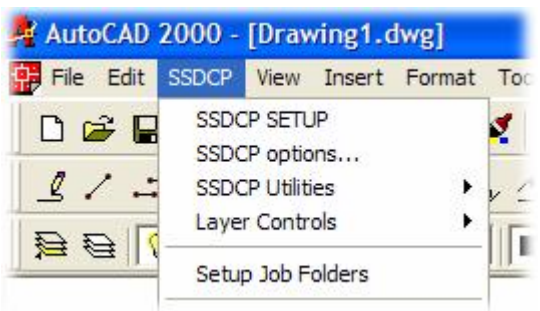
SSDCP Manual



SSDCP SETUP

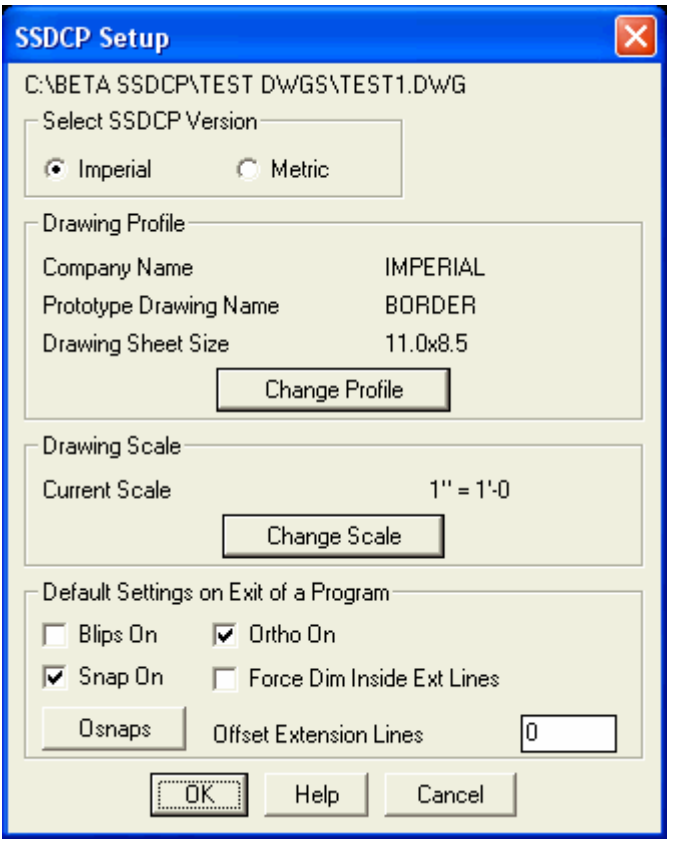
PLEASE NOTE: Using SSDCP requires the user to have FULL ADMINISTRATIVE RIGHTS on his or her PC. Please be certain you have Administrative rights before attempting to install or use SSDCP.

Using SSDCP setup to start a drawing



After selecting SSDCP setup from the menu, a standard "Save As" dialog box will be shown. Save the name of the drawing in the same manner as any other AutoCAD drawing.

SSDCP Manual



SELECT SSDCP VERSION:
Select either Imperial or Metric version.

DRAWING PROFILE:
This area contains the **LAST** drawing profile used. If this sheet is the same information as the last and all other information is the same, click on the OK button at bottom of dialog box. If anything needs to be changed, click on the Change Profile button. This will then allow changes to the drawing profile information.

DRAWING SCALE:
Shows the **LAST** drawing scale.
To change the drawing scale, click on the Change Scale button

When anything is changed in this dialog box, these settings will be written to a file on the hard drive. Anytime a program is cancelled or finished, these settings will be returned to the settings as selected and saved. These settings may be changed when running the SSDCP programs, but will be returned to the saved settings when NOT running SSDCP programs.

BLIPS ON: If checked, will place a small marker at pick points.

SNAPS ON: If checked, will turn on your snaps to whatever increment is selected.

ORTHO ON: If checked, will set crosshair to 0 degrees and 90 degrees movement only.

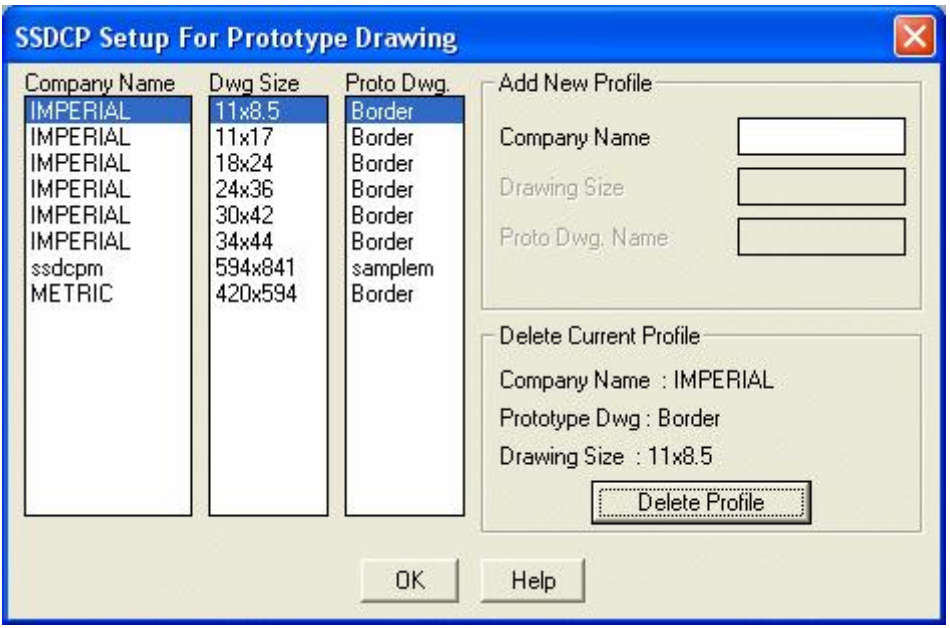
FORCE DIM INSIDE EXTENSION LINES: If checked, this will force all dimensions inside of extension lines.

OFFSET EXTENSION LINES: A "REAL WORLD" dimension can be entered if a little gap between the material and the end of the extension lines with dimensioning is desired. This dimension will not be changed by any of the SSDCP programs. (Suggestion: Do not set more than 0.0313 or 0.79502 mm)

OSNAPS BUTTON: Pick the Osnaps button for selecting the osnap controls desired for selecting points.

Prototype Drawings

SSDCP Manual



EXISTING INFORMATION READ FROM DATA BASE FILE (SSD.DAT) (FIRST three COLUMNS)

COMPANY NAME: Existing list of names of fabricators.

DRAWING SIZE: Existing drawing size of the sheets for fabricators. If very large numbers are in the drawing size box, those dimensions are in millimeters for the METRIC SIZE SHEETS.
DO NOT USE THESE WHEN WORKING IN THE IMPERIAL VERSION.

PROTO DWG: Existing name of pre-made prototype drawing for that company.
NOTE: If "BORDER" is shown for the PROTO DWG. NAME, the program will only draw a BORDER LINE around the outside of the sheet, CALCULATED ON THE SHEET SIZE AS SHOWN.

If any of the first three COLUMNS are selected, the data that is highlighted will be used. The list shown in the 1st column also contains some common standard size sheets.

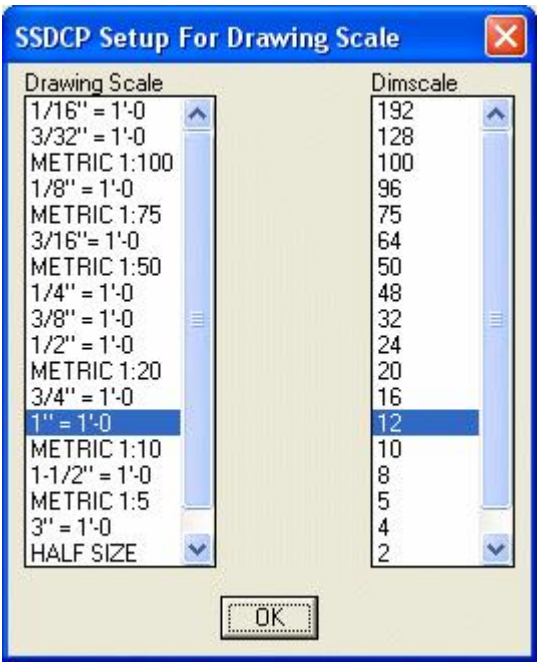
ADDDING A NEW PROFILE AREA

SSDCP Manual

DRAWING SIZE: a drawing size MUST be entered for the NEW PROTO DWG. Enter the size
by HEIGHT then WIDTH.
(EXAMPLES: (IMPERIAL: 11x 8.5, 24x36, etc.) (METRIC 210x297, 594x841, etc.)
NOTE: If working within the metric version, a standard Imperial size sheet can be used. The program will convert the dimensions entered to millimeters. (EXAMPLE: enter 24x36. The sheet size will be changed to 610x914.)
PROTO DWG: a FULL SIZE prototype drawing must be drawn to represent the new fabricator's sheet. If the name of the new fabricator's prototype drawing is not known, leave this box blank. This will then only draw a border line around the outside of the sheet and the proto drawing will have the fake name of border. This does not actually make a drawing called border.dwg. (the proto dwg. name cannot be longer than eight characters)

DELETE CURRENT PROFILE BOX:
This is the list of the current selected company names as highlighted in the dialog box. Selecting the item to delete, and then pressing the delete profile button will delete the names from the dialog box. Never delete all the names from the list. At least one company name in the list be listed. Do not delete the company name called "SSDCP" or "SSDCPM". These are standard shop drawings that are included with the SSDCP package.

Selecting Drawing Scales



EXPLANATION OF DRAWING SCALES

SELECT the scale that desired for the drawing. Notice that this is a combination of scales for both IMPERIAL and METRIC versions. When selecting a scale, the program will only input the corresponding DIMSCALE value into the program. If working in the IMPERIAL version a corresponding value for IMPERIAL. (Ex. 1" = 1'-0) must be selected.
If working in the METRIC version, either IMPERIAL or a METRIC scale may be selected. The dimscale values are listed in decending order. NOTE: As the DIMSCALE VALUE decreases the SCALE value increases.

After a scale has been selected, click on the “OK” button.

Drawing Scales

INFORMATION and CLARIFICATION FOR DRAWING SCALES

Below are the English and Metric drawing scales. The scales have been put in order based on the dimscale value of the drawing scale. Both English and Metric scales are shown for comparison of the differences in the values.

The E = numbers are compared to 1'- 0. (Ex. 1/8 to 1'- 0)
The M = numbers are the standard metric scales.

DRAWING SCALE	DIMSCALE VALUE
M = 1:200	200
E = 1/16	192
E = 3/32	128
M = 1:100	100
E = 1/8	96
M = 1:75	75
E = 3/16	64
M = 1:50	50
E = 1/4	48
E = 3/8	32
E = 1/2	24
M = 1:20	20
E = 3/4	16
E = 1	12
M = 1:10	10
E = 1 1/2	8
M = 1:5	5
E = 3	4
HALF	2
FULL	1

Because these programs were originally written for the English system of measurement, all of the drawings and layouts for dimension locations are based on that version.

The (M = number) dimscale values are not exactly a direct conversion of the (E = numbers). Example: using the M = 1:10 (metric scale), all drawings and dimensions will be a little bit larger than if E = 1 was used. This could result in

SSDCP Manual

All main programs (beams, columns, bracing, stairs, handrail, etc.) were written to be drawn at a 1"=1' scale.

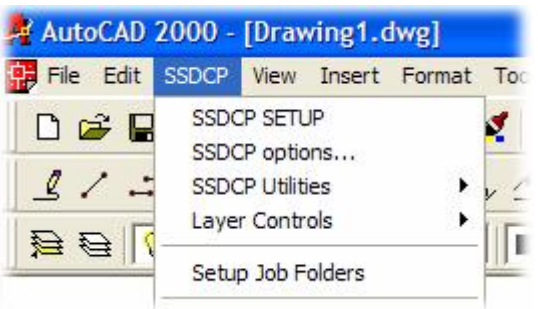
When you pick the drawing scale from the sidebar menu, the only item entered into the computer is the DIMSCALE NUMBER. It makes no difference which version you are working in.

Based on the above information, if the E = numbers are used when working in the Metric System, all drawings will look much better because the programs were written to use the English system of measurement.

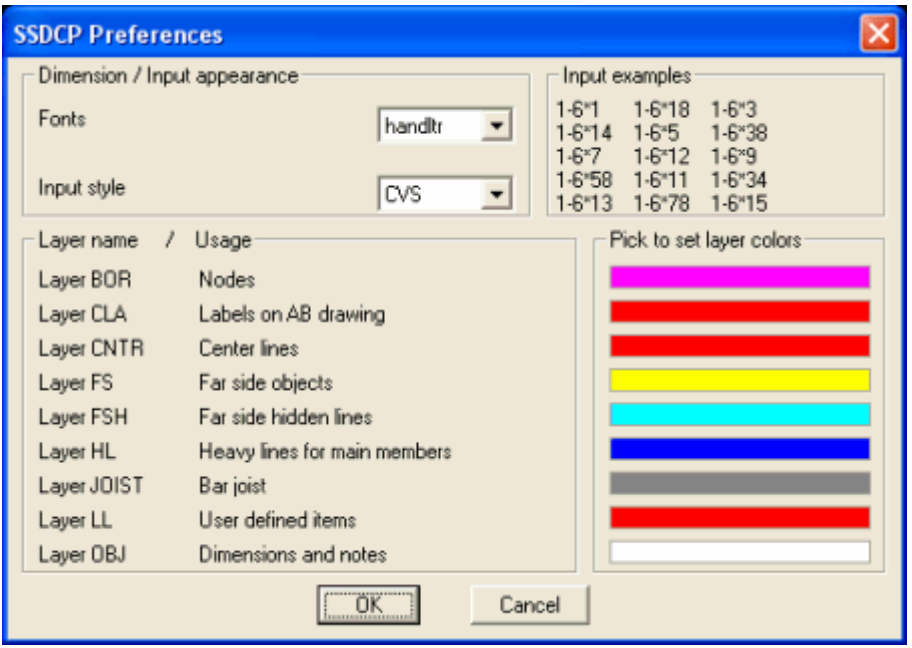
Using DWT Templates

A "standard" sheet with scale and title block filled in can be made and any notes desired on that sheet. Then save this sheet with a .DWT (template name extension). Consult your AutoCAD manual or the help files about this for more information. This is a very good feature and can save a lot of time and trouble.

SSDCP Options



The SSDCP Preferences (Options) screen will allow selecting the type of input (CVS style or Numeric style), the choice of font (Handltr or Simplex) and the ability to set the choice of colors for the layers SSDCP uses. The fonts have two choices each. Handltr/Spec2 and Simplex/Spec2 both are fonts that have no slash (/) with the fractions.



SSDCP UTILITIES

Plot – when this is selected the Layers Properties dialog box is shown first to allow the BOR (border) layer to be selected for no-plot, if desired. Then the normal AutoCAD plot dialog box will start.

Current drawing info – provides the following information:

- Path of drawing on computer
- Name of current drawing
- Total time on current drawing
- Imperial scale
- Metric Scale

SSDCP Manual

Timesheet Program

The Timesheet program will keep up with time on a job based on any or all of the following items:

1. Date
2. Drawing Name
3. Project or Job Number
4. Client's name
5. Time on drawing for any editing session
6. By description of work done (ex. – detailing, revisions, approval changes, etc.)
7. By any code for any type of detailing (ex. – BM for beams, COL for columns, etc.)

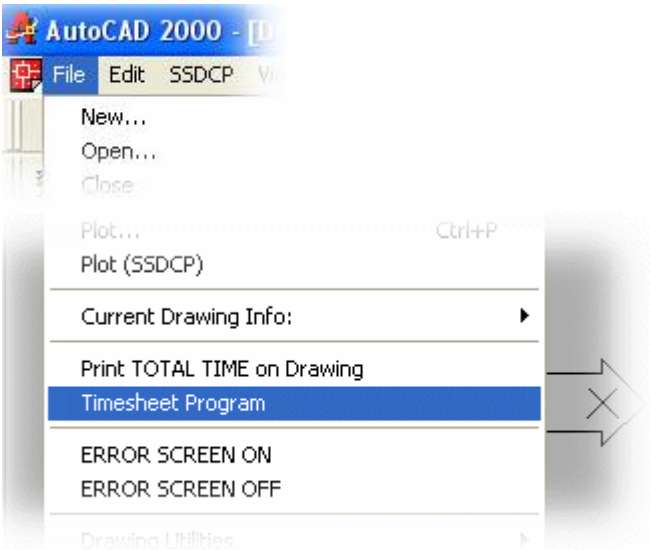
    It can be customized with custom code names or numbers.

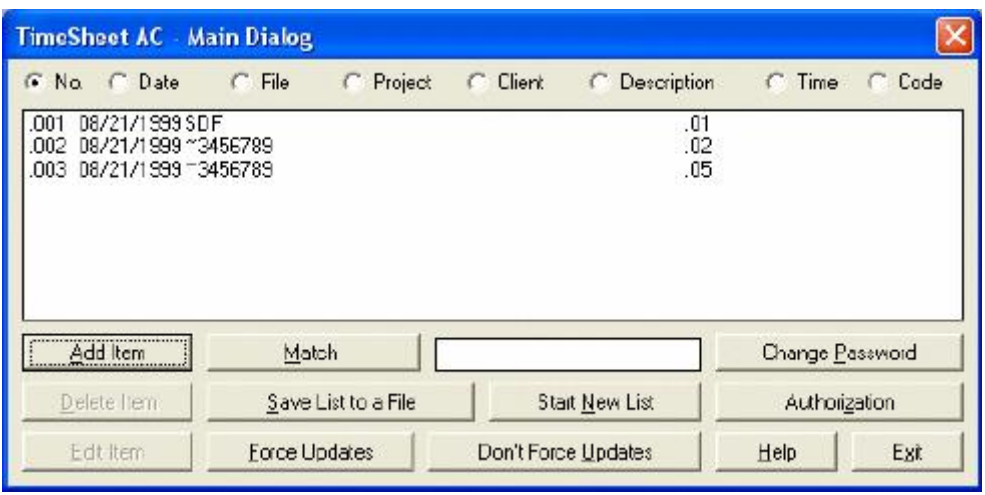
The program also has the following features:

1. Will make an invoice based on any of the items above. The text style cannot be changed for making these invoices, otherwise the dollar and cents will not line up.
2. Will write the above information to a "text" file, if desired. This will allow importing into a word processing program.
3. Delete or edit any item
4. Setup a password or authorization name for security
5. Will sort items based on any of the above information
6. All items have an internal on screen help item.
7. The program uses dialog boxes for all input.
8. The program will work on any drawing at any time,

Anytime a new drawing is started or an existing drawing edited, this program will operate. It will not recognize any previous drawing created before installing the program. However, this information can be obtained by using the program "Print Total Time on Drawing". Then use the edit portion of the program and enter in

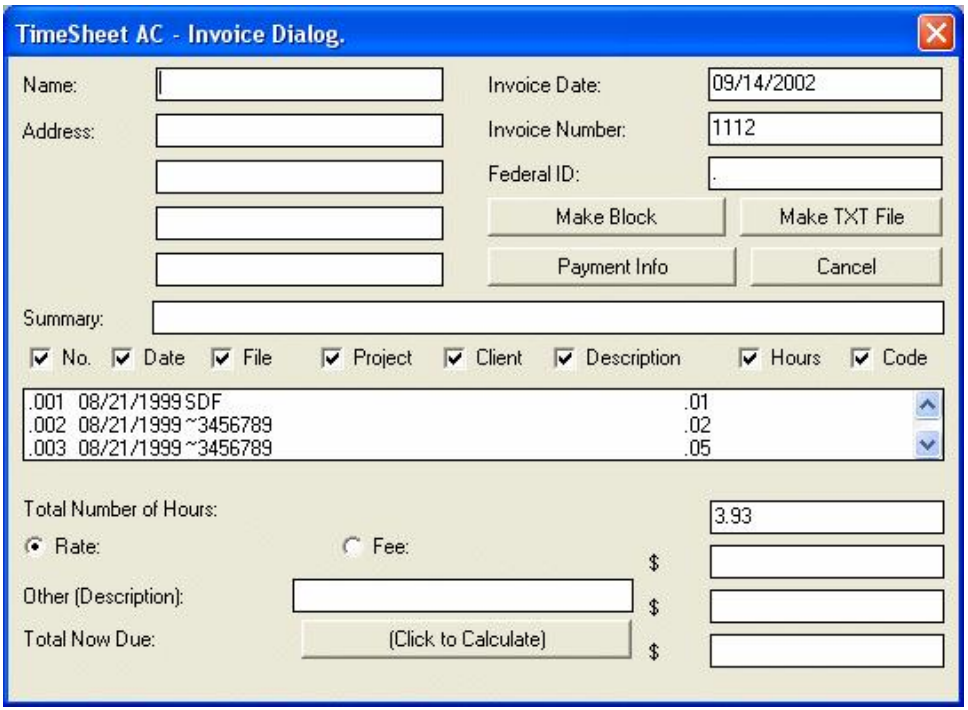
SSDCP Manual





Clicking on the first row of items (at the radio style buttons) will sort the list according to the heading chosen.

Start by clicking "Add Item". Then to enter text in the textbox below the main list in order



To include any heading on an invoice, click the desired checkbox. Choose either "rate" or "fee" for your project.



The first time this is used, enter "**.**" as your authorization code.

Error Screen ON – turns the error screen on

Error Screen OFF – turns the error screen off

LAYER CONTROLS

Change entity to another layer – click on any existing entity (multiple can be selected) and then choose an entity that is on the layer desired. This will change the selected entities to the layer selected.

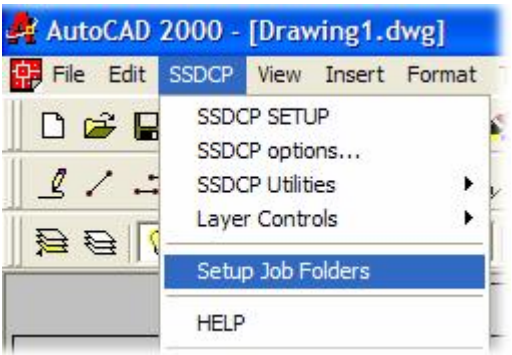
Change current layer to:
OBJ – dimensions and notes layer
FS – far side objects layer
BOR – nodes layer
HL – heavy line (for main members) layer
FSH – far side hidden lines layer
LL – User defined items layer
CNTR – centerline layer
JOIST – bar joist layer

SETUP JOB FOLDERS

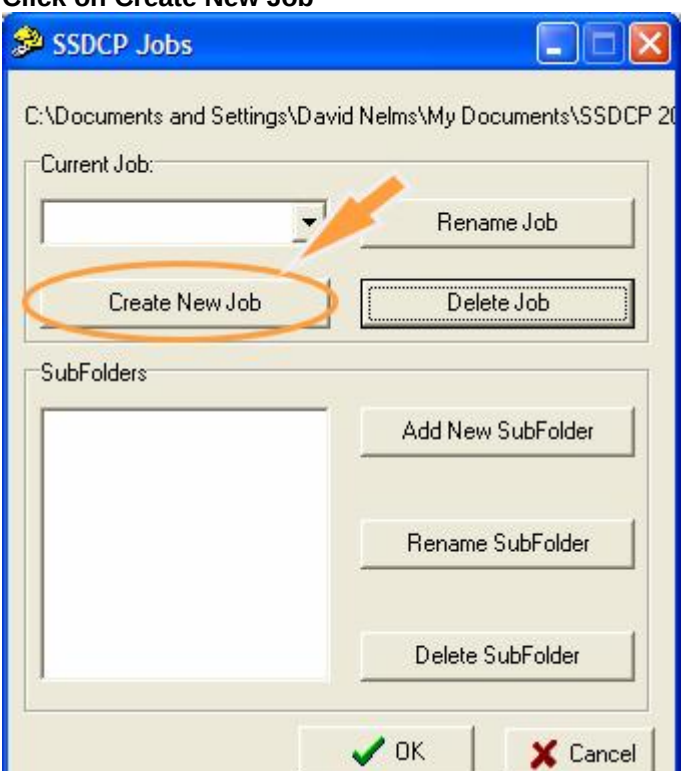
In an effort to give some structure to the file system within SSDCP and to aid in future enhancements, this Jobs Folders Program has been developed. In the past when detailing bracing, a file was written to your SSDCP folder, but was not job specific. Now, a Jobs Folder for any job can be created. For example, if a Job Folder with a name of NCJob1 was created and added some bracing, those files your be written to the Bracing Sub-Folder under the NCJob1 folder. Then when the next job is created, another set of sub folders will be created, with empty folders. So what is done within one job does not affect another.

In order to run this, click SSDCP then “Setup Job Folders". A dialog box allows the job folders to be setup as well as the option to make sub folders.

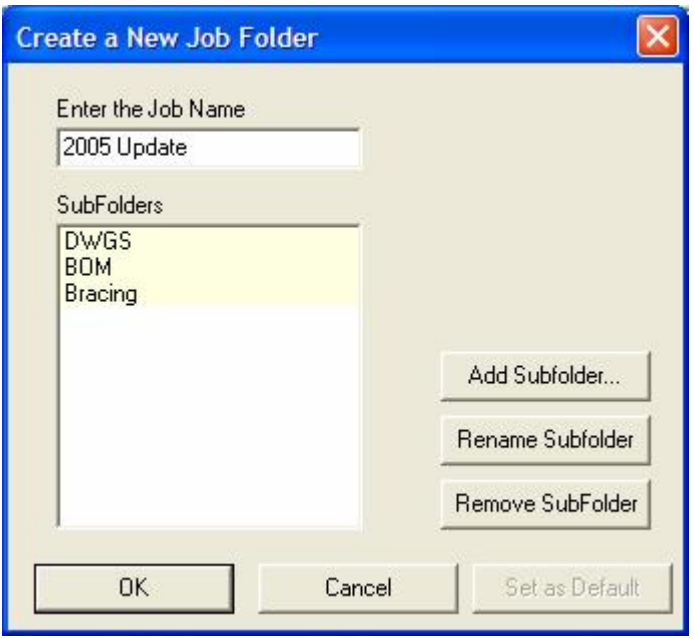
SSDCP Manual



Click on Create New Job

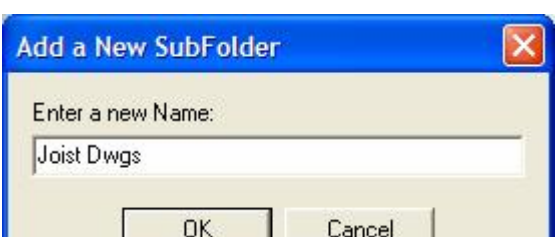


Enter the Job name to be created. Note that the folders DWGS, BOM, and Bracing are created each time a new job is started. If a new sub-folder needs to be created, click on "Add Subfolder".

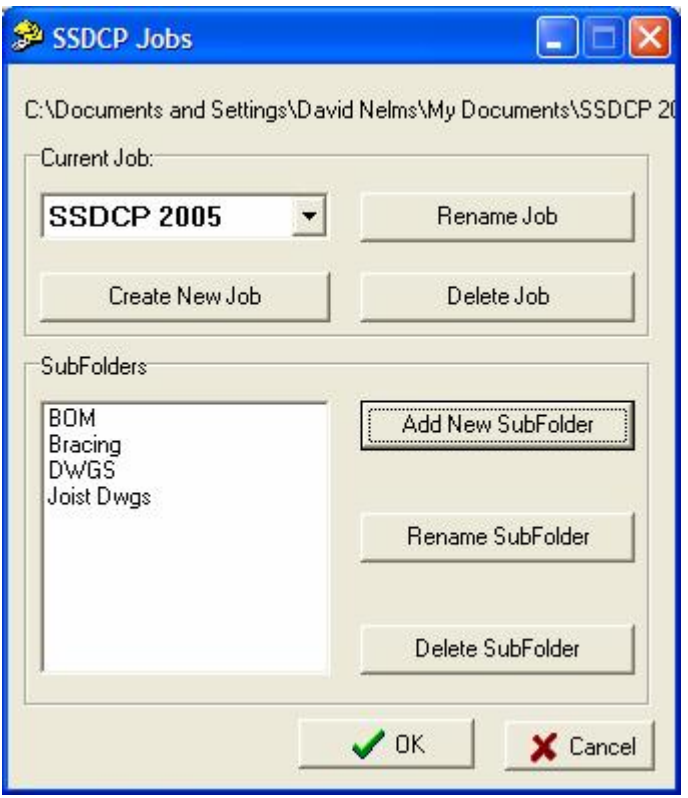


Adding a Sub-Folder

Clicking on Add Subfolder will allow the name of a subfolder to be entered. Type the name of the new sub-folder and click OK.



The new sub-folder is now in the list of sub-folders that will be created under the main Job folder.



Renaming A Sub-Folder

To rename any sub-folder (other than the three locked standard folders), highlight the name of the folder to rename, and then click on "Rename Subfolder".



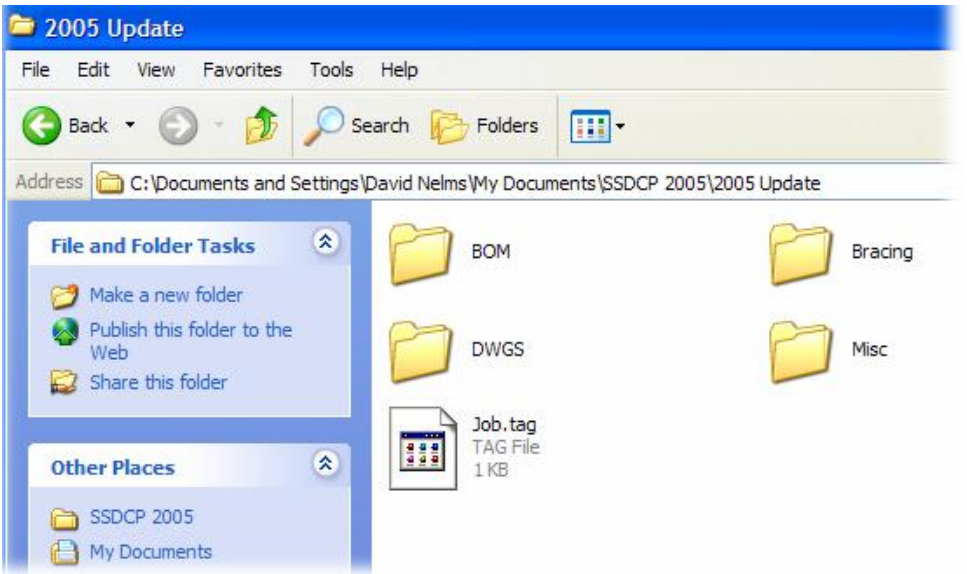
A dialog box will allow you to change the folder name.
Enter the change and click OK.



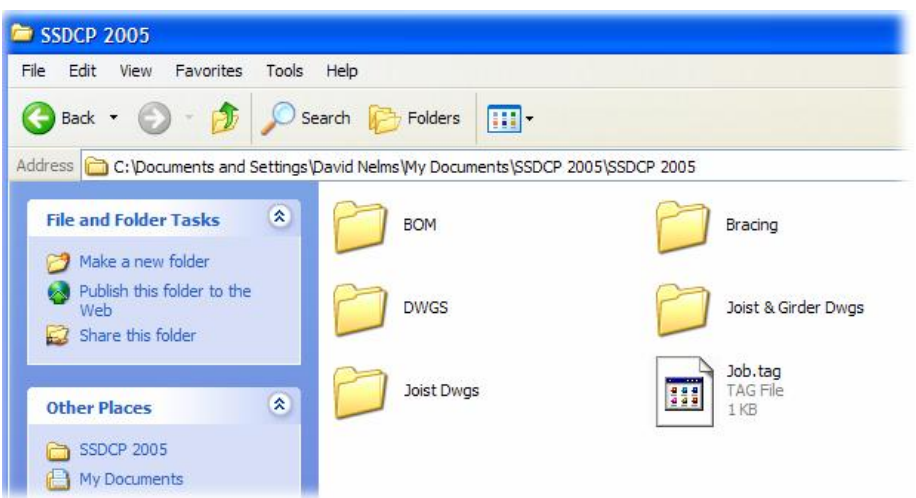
The sub-folder list now reflects the change. Sub-folders can be deleted in the same manner, by highlighting them and then clicking "Remove SubFolder".



The new Job Folder now is located under the “My Documents” folder.



The selected sub-folders have now been created under the main job folder.



SSDCP Manual

SSDCP provides three custom toolbars to help select commands that are frequently used without having to use the pulldown menus or type in the command on the keyboard. Do not try to use the big buttons for these toolbars. All standard AutoCad commands for resizing or moving these toolbar will apply.

SSDCP STANDARD TOOLBAR:
This toolbar will appear across the top of the screen whenever AutoCad is started. There will be a "TOOL TIP" shown, stating what that button does when the pointer is over the selected button. Some of these buttons are a single button and some of them are "flyout" buttons. Hold the button down to see the rest of the flyout button choices. These buttons are the same as the standard AutoCad buttons. Some of the buttons are standard AutoCad commands and some are for the SSDCP programs.

SSDCP DIMENSIONING TOOLBARS:
There are two vertical toolbars located on the right hand side of the screen. These will help entering numbers or dimensions into the programs without typing on the keyboard. Once you have chosen the buttons to enter, you must move the pointer out of the button area before pressing the ENTER key or clicking the mouse.

First toolbar called "NO"
This toolbar has whole numbers in it from 0 to 11. From this column of numbers, you may enter a number, feet, or inches. You will also find a decimal point, minus sign, Ft sign, and a @ sign button and a "YES" button.
The "@" sign is used when you want to draw a line at a certain length, at a < certain angle.
(EXAMPLE: LINE command, @ 2'-0 < 22.5) (Note: the < sign in under the frac toolbar.)

Second toolbar called "FRAC"
This toolbar is for entering fractions of an inch. You will notice that the 1/4" increments are in green, and the 1/8" increments are in yellow. This makes finding the numbers a little easier. There is also a "NO" button.

EXAMPLES FOR ENTERING DIMENSIONS:
Remember to move the pointer out of the toolbars before pressing the enter key.

DIMENSION TO ENTER	**PICK BUTTON**
Whole number	button(s) of choice (enter)
¾"	button **3/4**, (enter)
6"	button **6**, (enter)
6 5/16"	button **6**, button **5/16** (enter)
9'-0	button **9**, button **FT** (enter)

120'-10 15/16 button **1**, button **2**, button **0**, button **FT**, button **10**, button **15/16** (enter)

If you choose the "Y" (YES) or "N" (NO) button for answers to the questions in the programs, these will be entered with no further key strokes.

SPECIAL INFO ON MENUS ONLY FOR ALL THE WINDOWS VERSIONS:
If you make a custom change in the SSDCP.MNU menu file, you must erase the following files to put these changes into effect.
1. SSDCP.MNS
2. SSDCP.MNC
3. SSDCP.MNR

If you make some custom toolbars, you must copy the code pertaining to the custom toolbars you have made from the SSDCP.MNS and put this into the SSDCP. MNU, then erase the above named files. Do not attempt to do this unless you have some experience in changing menus.

CUSTOMIZING TOOLBAR BUTTONS

You can only create one button at a time. All the SSDCP menu files must be in the same directory as the ACAD menu files:

SSDCP.MNU, SSDCP.MNS, SSDCP.MNC, SSDCP.MNL AND SSDCP MNR.

Check the name of the menu group

1. Pick TOOLS from top bar menu.
2. Go to "Customize Menu"
3. Under FILE make sure name is ACAD. If not, change to ACAD.
4. Close menu customization dialogue box.

TO CREATE NEW PALETTE TO PUT BUTTONS IN:
1. Pick TOOLS from top bar menu.
2. Pick "Customize Toolbar".
3. Click on NEW. (New TO0LBAR dialogue box will appear.)
4. Under toolbar name, enter any name you want. (Ex. MYTOOLS)
5. Click on O.K.

SSDCP Manual

TO CREATE A CUSTOM BUTTON:

1. Pick TOOLS from top bar menu.
2. Pick "customize toolbars".
3. Arrow down to "ACAD.MYTOOLS"
4. Pick customize button.
5. Under "categories", select "Custom".
6.Click & Drag the single "blank" custom button to your "palette picture".
7. Use enter button on mouse and pick blank button in your palette.

Wait for the button properties dialogue box to appear. It may take a few seconds.

8. In name box, enter NEW NAME for button. (Ex. MYBUTTON) This will appear as the "Tool Tip" when you point at the button.
9. Type any message in the help box to describe what this button will do. This message will be printed below the command line area.
10. Under MACRO, enter command for whatever you want the button to do when chosen.

See Autocad Manual for instruction how to enter macros.

11. Note: You can chose any "Predrawn Icon" from the Button Icon Box or you can click on the

"Blank" button and create your own. See AutoCad manual for further instructions on how to do this.

12. Pick APPLY button.
13. Close all dialogue boxes.
14. The button in the palette box should be updated to show the picture and should work when chosen.

TO ADD EXISTING BUTTONS TO YOUR PALETTE (MY TOOLS)

1. Pick TOOLS from top bar menu.
2. Pick "customize toolbars".
3. Pick ACAD.MYTOOLS
4. Pick customize button.
5. Under categories, pick desired command section. (Ex. Draw)
6. Pick desired draw icon and drag to "MYTOOLS" PALETTE.
7. Close the dialogue box.

TO EDIT EXISTING BUTONS

If you want to edit an existing button or flyout, you can go directly to either the Button Properties or the Flyout Properties dialog box by double right clicking on a button. Once

You may add as many standard buttons to the "my tools" palette as you wish. You need to plan ahead and draw a simple picture of the buttons you want in this palette before you start. Also work out the MACROS that will control what this button does before you start. We recommend that you initially create only one custom "palette" with one custom "button" in it until you see how all this works. When this is done, "EXIT" AutoCAD and then "RE_ENTER" AutoCAD to make sure your custom palette and button is still there and it works. You can always add to this palette later. See the "customization " AutoCAD manual for more help. Once you have created one button and it works, you can easily create any custom toolbars you wish.

SSDCP Defined Functions

The following is a list of defined functions used within SSCDP. If you have a "Custom" ACAD.LSP program, do not duplicate any of these DEFUN names. If you have a duplicate name and want to know the function of a DEFUN that is duplicated, contact SSDCP.

DEFUN _M	DEFUN BOLTZA	DEFUN C:GET	DEFUN BOLTZ
DEFUN CLRSCR	DEFUN ADDNUM	DEFUN BELL	DEFUN STXT5
DEFUN SPC	DEFUN SMS	DEFUN 2SPC	DEFUN SEC
DEFUN IN	DEFUN WELD	DEFUN OUT	DEFUN WELD1
DEFUN FLASH	DEFUN DWS	DEFUN WARN	DEFUN STXT
DEFUN DTR	DEFUN STXT1	DEFUN _RTD	DEFUN STXT4
DEFUN OBJ	DEFUN STXT2	DEFUN FS	DEFUN STXT3
DEFUN BOR	DEFUN HGET	DEFUNHL	DEFUN ROT
DEFUN FSH	DEFUN _ROT	DEFUN CL	DEFUN _GETIME
DEFUN LL	DEFUN _TIMER	DEFUN JOIST	DEFUN INTD
DEFUN TZ	DEFUN DIMD	DEFUN HDIS	DEFUN DDD
DEFUN VDIS	DEFUN REALD	DEFUN _SDFN	DEFUN STRD
DEFUN EDFN	DEFUN YND	DEFUN TAN	DEFUN MYCK
DEFUN BA	DEFUN CLA	DEFUN RI	DEFUN CNTR
DEFUN HY	DEFUN DIMLINE	DEFUN YN	DEFUN C:V
DEFUN YNN	DEFUN C:H	DEFUN BC	DEFUN C:C
DEFUN LOTQ	DEFUN C:A	DEFUN BCHG	DEFUN C:R
DEFUN RBOLT	DEFUN C:B	DEFUN WBOLT	

SUGGESTIONS FOR USING SSDCP

Because you will be learning many different programs, here are a few suggestions that may help you acquire the knowledge you need to use these programs to their fullest extent.

IMPERIAL OR METRIC VERSION INFORMATION:
If you are working in the imperial version, all dimensions, answers to global questions, and material sizes must be in feet, inches, and 1/16ths and loads are in kips. If you are working in the metric version, all dimensions, answers to global questions, and material sizes must be in millimeters and loads are in kn.

ERROR SCREEN:

If AutoCAD determines you have made an error, the program will come to a stop with the following message in the command line area. AutoCAD Error = (Will print what type error has occurred.) If you don't want this message shown every time, turn off the error screen (see note 1. below). If you want more information on this error, answer "Y". The Error Screen will appear. At the top of the screen, it will give you the type of error that was made. This screen will also suggest some reasons for this error. Please read the screen and make a note of the error. Do what the screen suggests to correct the error. If you answer "N": "END OF PROGRAM" and you will have to try again.

NOTE 1.: If you don't want this question asked every time, turn off the error screen as listed in the pull down menu under "SSDCP/SSDCP Utilities".

COMMAND AREA ON SCREEN:
You will see three lines of text at the bottom of the screen. This is the command area. This area tells you what is required when running the programs. You must pay close attention to this area. All questions and remarks are displayed in this area unless you have switched to the text screen. When you are running the programs you must read this area carefully to know what the programs are requesting you to do at that time. Do not ignore this area. If you do, the programs will probably crash. This cannot be stressed enough. If you input an answer and you press the enter key, it will be too late to change this. If you want to correct your input, use the backspace key before you press the enter key. Take your time and be accurate with inputs.

1. BECOME FAMILIAR WITH ALL PROGRAMS IN TABLET MENU AREA #1 OR USE THE PULL DOWN MENU TO RUN THE MISC. PROGRAMS.

In your spare time, start a new sheet at a 1"=1' scale. Pick each of the programs

2. IF YOU HAVE PURCHASED THE MISC. DRAWINGS IN PULLDOWNS:

Use the SSDCP Library choice under SSDCP PULL DOWN and insert each of the blocks on your sheet. See what it will draw. Some of these blocks are for erection drawing scales (1/8 or 1/4) and some are for detail sheet scales. (1"=1') Try to remember what these blocks can draw for you. You can insert the block, then try changing the dimensions and/or picture for practice. Use all of the change or modify text programs [F- 6] [F- 7] [H- 23] [H- 24] [H- 25] on the digitizer (or listed in the pull down menus) so you can see how they work. You can also add your own blocks to these library files. See more instructions in the manual to do this.

3. USE THE "DRAW SECTIONS THRU" PROGRAMS

Pick different steel sizes to draw sections thru using the dialog boxes. This will teach you how to draw sections thru steel sizes and work these lisp programs. Utilize all choices of questions asked in programs so you can understand all the things the program will do. Run each of the programs several times with different inputs and sizes.

4. If you are running a program that has the "AUTOMATIC GLOBAL QUESTIONS" appear on the screen when you first run the program:

Enter the line number for each line to change, so you can understand what these changes will affect. Sometimes, the answers will just change automatically without asking any more questions. This will apply for "yes" or "no" answers more often than not. Sometimes, the way you answer a question will prevent or automatically change some of the other global questions because they are logical conclusions based on the first change. After you have made all the changes to a particular set of global questions, they will be written to a file. They will be read from this file the next time you run this program in the future. This can save a lot of time by not having to go through all these global questions every time you start a new sheet of details.

5. WORK ALL OF THE CALCULATOR PROGRAMS

Use all choices for all programs.

6. USE THE DIMENSIONING PROGRAMS ON DIGITIZER OR IN PULLDOWNS

Practice using dimensions on your drawings. Use all the choices - vertical, horizontal, continue, aligned, rotated and leader lines. Because we use the SSDCP stacked fraction style, these are LISP programs, not the standard way that AutoCAD dimensions. You will find these programs will work better and give

Try using different answers to the global questions to detail different ways. If you mainly detail for only one fabricator, once you have set most of the global questions, you will probably never change these global questions again. Use all options of the global questions to draw different pictures and to use all of the program capabilities. After you have used all of the options you can eliminate some of the options by resetting the global questions not to draw some of the details. Unless you use these options, you will not be fully aware of what all these programs can draw. Again, take your time when answering the questions and entering dimensions. The program will do whatever you tell it to do. While you are using these programs, try to think what other things this program could do by "fooling" the program. EXAMPLE: You will find when running the programs that the programs will request a dimensional input. Normally, this input will be a positive (+) input. If you put a minus (-) in front of the input, then the opposite effect will occur when the item is drawn. You will just have to play with this a little bit to really understand what will happen when the item is drawn. This shows the flexibility of using a combination of the programs with AutoCAD.

Run each of the programs several times using different setup and material sizes, dimensions and options. After you have a sheet of details complete, use some of the minor programs (tablet area #1 or in pull downs) to add misc. pieces to your shop pieces for practice. Practice putting assembly marks on your details and weld symbols. Once you have completed your sheet, try plotting the sheet. Don't forget to turn off the "BOR" layer (green color) before you plot the sheet. This is for temporary information only.

IMPORTANT REMINDERS

DRAWING PROCEDURE

Detail ALL horizontal & vertical bracing for the job, FIRST. This will write the information about the BRACING PLATES to the hard drive, so you may very easily draw the bracing plates on your beams or columns.

BEFORE PLOTTING A DRAWING:

1. **ZOOM "ALL"** of the drawing.
2. **TURN OFF** the **"BOR" LAYER**. (Color Green on the Drawing)

4. Plot drawing to whatever scale you made the drawing to. (Ex. 1"=1')
5. If you are going to have someone else plot these drawings, they need to know these facts.

SENDING YOUR DRAWINGS TO SOMEONE ELSE:

You may in the course of doing business, need to send a drawing file to some other person. Because of the fact that we are using the **SSDCP** text style in our drawings, they may or may not have the **special shape files** required to print the text on the drawings in their computers.

You must send the following three files for the **text**. Copy these three files to the disk along with the drawings you are sending them.

1. SIMPLEX.SHX
2. SPEC.SHX (For stacked fractions)
3. HANDLTR.SHX (Special shape file for hand lettering style)

You will also need to tell them to copy these three files into their AutoCAD directory, **before loading the drawings.** Otherwise AutoCAD will tell them it can't find these shape files. You will only have to do this the first time you send them drawings. Just tell them not to erase the THESE .SHX FILES when they get through.

They will not have the SSDCP.mnu file that has been assigned to these drawings. When they try to load these drawing, AutoCAD will tell them that it cannot find the SSDCP.mnu. just tell them to load whatever menu file that they normally use. (ex. acad.mnu) Do not send the SSDCP.mnu file to them because it won't work.

If they are going to do any modification to the drawings, they will also need to know how to use the "special" control keys for entering "fractions". You could send them a copy of this page and a copy of the page in the manual explaining these key sequences and how to change to the SSDCP text style. The "SSDCP" text style must be the "current" style when modifying these drawings.

ENTERING DIMENSIONS (IMPERIAL)

CHOICES FOR ENTERING DIMENSION IN IMPERIAL VERSION ONLY

Note: This does not apply to the metric version. All inputs must be in millimeters.

SSDCP Manual

If the program requires you to enter a minus (-) dimension, put the (-) before the dimension. You do not ever have to enter a plus (+) sign. If it is not (-) then it is assumed to be a positive dimension.

[1] Standard AutoCAD Dimensioning Input:

TO ENTER	TYPE	TO ENTER	TYPE
10'- 0	10'	3 1/4"	3.25
10'- 3 ½	10'3.5	3"	3
10'- 3	10'3	1/2"	.5

[2] Input from Number Keypad: Feet [.period][Inches][Sixteenths]

TO ENTER	TYPE	TO ENTER	TYPE
10'- 0	10	3 1/4"	.0304
10'- 3	10.03	3"	.03
10'- 3 ½	10.0308	5/16"	.0005

[3] Input from Number Keypad: Feet [-dash][Inches]*[Fractions]

TO ENTER	TYPE	TO ENTER	TYPE
10'- 0	10-	Quarters	*14 *12 *34
10'- 3 ½	10- 3*12	Eights	*18 *38 *58 *78
3 1/4"	3*14	Sixteenths	*1 *3 *5 *7 *9 *11 *13 *15
3"	3		

Note: If you want to change choices on the same sheet of details, type this at the command line **before** running another program.

(SETQ CVSCT NIL)

(The variable name for the choice is "CVSTY". This is just for your information.)

CONVERTING CVSpro DRAWINGS TO SSDCP STANDARDS

If you have dxfin a CVSpro drawing into AutoCad and you want all of the SSDCP programs to work correctly on this drawing, do the following:

1. At the bottom of the SSDCP pull down, click on "RESET LAYERS AND DIMVARS". This will add the layers, dimvars and text style to the CVSpro drawing using SSDCP programs
2. Then click on "CONVERT CVS DRAWING" and follow the directions on the screen. This will convert the dimensions and styles to ensure all the SSDCP programs will work.

Adding Material to Data Files

INSTRUCTIONS FOR ADDING ADDITIONAL MATERIAL INTO THE DATA FILES

Material sizes for detailing steel are in 2 different data files. The files are the following:
Data file for Imperial size steel: SSDCP1.DTA
Data file for Metric size steel: SSDCP2.DTA (Includes Canadian and German)

You must use a text editor to access the data file. You must work with an editor that will read and write ASCII text files. Be sure to make a backup copy of these files before adding or changing the files.

Load the selected data file you want to change into the text editor. You will have to find the area where you want to add the sizes you want. These dimensions are the detail dimensions of the steel, not design dimensions. Look through the data file to give yourself a sense of how it is written. Use the "syntax" of the existing lines in the files to help you get the numbers in the correct order. You must have a space between each number in the data lines.

The data fields are read as follows for W, HP, M, S shapes:
[depth] [flg width] [flg thk] [web thk] [k dist] [flg gage] [Size]
EXAMPLE:

```
("W5"
  (5.125 5.000 0.4375 0.25 0.75 3 "W5x19")
  (5.000 5.000 0.3750 0.25 0.75 3 "W5x16")
```

The data fields are read as follows for C & MC shapes:
[depth] [flg width] [flg thk] [web thk] [k dist] [flg gage] [Size]
EXAMPLE:

```
("C5"
  (5 1.875 0.3125 0.3125 0.75 1.125 "C5x9")
  (5 1.750 0.3125 0.1875 0.75 1.000 "C5x6.7")
```

The data fields are read as follows for PIPE (standard, x-strong, dbl x strong & big pipe shapes):
[outside diameter] [wall thickness] [weight] [size]
EXAMPLE:

```
("P"
```

The data fields are read as follows for TUBE STEEL shapes. (Rectangular or square):
[longside] [short side] [wall thickness] [weight] [size]
EXAMPLE:

```
("TS 2.5"
  (2.5 2.5 0.2500 7.11 "TS 2- 1/2x2- 1/2x1/4" )
  (2.5 2.5 0.1875 5.59 "TS 2- 1/2x2- 1/2x3/16")
```

The data fields ARE READ as follows for ANGLE shapes (same for = legs or not = legs):
[long leg] [short leg] [thickness] [k dist][weight] [y dist] [x dist] [size]
EXAMPLE:

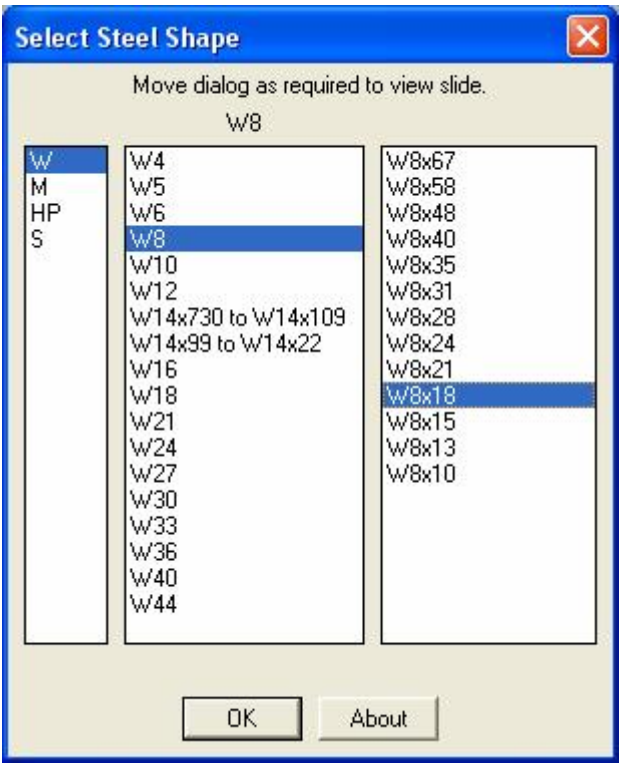
```
        ("L"
("= LEGS"

            (1.00 1.00 0.1875 0.2500  0.80 "1x1"       )
  (1.25 1.25 0.2500 0.4325  1.92 "1- 1/4x1- 1/4")
  (1.50 1.50 0.2500 0.3750  2.34 "1- 1/2x1- 1/2")
  (1.75 1.75 0.2500 0.5000  2.77 "1- 3/4x1- 3/4")
  (2.00 2.00 0.3125 0.6250  3.92 "2x2"       )
```

Note: If you are using the SSDCP2.DTA (metric file) for Metric sizes, the TUBE STEEL & ANGLE dimensions must be entered in decimal inches, but the size must be entered as a Metric size. The programs will convert these dimensions to millimeters and kilograms for weight purposes, but the program and dialog box will use the Metric Size for the description of the section. For all other steel sections, the dimensions and sizes must be in the metric system.
The size field in the data field for angles is not used in any program, but it still has to be a part of the data field.

SELECTING STEEL SHAPES

SSDCP Manual



NOTES PERTAINING TO SELECT STEEL SHAPE DIALOG BOX

This dialog box as shown is for selecting a Wide Flange beam, as an example. This dialog box will be shown when required by any SSDCP program. The box shown will also apply to channels, pipe, tube steel, or angles. This same occurs for all metric steel sizes.

> Depending on what section is required in the SSDCP programs is what will be shown in the dialog box.

1. The first column will show the "shapes" that is required by the program.
2. When you pick a shape required, the choices of sizes will appear in the second column.
3. When you pick a size in the second column, the exact sizes of all the choices will appear in the third column.

When all the columns are highlighted for the section you want, click on the OK button. Before picking the OK button, you can select a different size if you have a change of mind.

The section chosen will be highlighted as the "default" the next time that the program requires you to select the same shape as before. This will occur over different type of shapes. If the shape that is highlighted is the same, just press the enter key or click on the OK button.

The names of the files that contain the data for steel sections are as follows:
SSDCP1.DTA for Imperial steel sizes
SSDCP2.DTA for Metric steel sizes
You can add to these files with any new sections with an ASCII text editor. Use same syntax to add to files.

TEXT STYLES

SPECIAL SHAPE FILE FOR SSDCP'S PROGRAMS

THIS PERTAINS ONLY TO THE IMPERIAL VERSION OF THESE PROGRAMS

All programs use a special text style called "SSDCP" to enable the computer to print stacked fractions on the drawing. In order to create this special style, you must assign two different font file names to the style name. One is a standard font file and the other is a big font file. When you type a letter on the screen, AutoCAD looks through two different shape files to find the correct ASCII code to enable the computer to know what letter or number to print on the screen. This special style shape file will be called SSDCP. It will contain the "SIMPLEX.SHX" file to take care of all the upper and lower case letters and a big font file called "SPEC.SHX" which will print the stacked fractions.

In order to print a **stacked fraction** when you are in the text mode of AutoCAD, you must use the following input keys:

input	prints
`1	1/16
`2	1/8
`3	3/16

`7	7/16
`8	1/2
`9	9/16
`0	5/8
`q or `Q	11/16
`w or `W	¾
`e or `E	13/16
`r or `R	7/8
`t or `T	15/16

In order to print **special symbols** when you are in the text mode of AutoCAD, you must use the following input keys:

input	**prints**
`S	Diameter Symbol
`D	Prints "stacked" plate symbol
`F	Prints "stacked" centerline symbol
`J	+/- Symbol
`K	Degree Symbol
`[	Subscript L (for shipping & assembly marks)
`]	Subscript R (for shipping & assembly marks)
`{	Subscript R/L (for shipping & assembly marks)
`(	(N.S.)
`)	(F.S.)
`*	(1-N.S. & 1-F.S.)
`!	(CTR'D)
`%	MK

The ` key is just to the left of the number 1 on the top row. Press the ` once, then any number or letter as shown above. Do not hold the ‘ key down. To print a stacked fraction when in the text mode of Autocad:

Example: Type 11'-1`3 to print 11'-1 3/16 in-stacked format.

This is not related to entering dimensions in the programs in any way. Enter dimensions in your usual manner.

In the "setup.lsp" program there are three lines of code that can be modified by you, should you wish to change the way the letters, numbers, or fractions look. Use a text editor to do this. The lines look similar to the following:

```
(COMMAND "STYLE" "SSDCP" "SIMPLEX,SPEC" 0.0 0.8 0 "N" "N" "N")
Ref. No.   1     2        3      4  5  6  7  8  9
```

The only numbers you can change are the Ref. No. 5 and 6. All other text or numbers will remain as shown. If you change one line, make sure you change all three lines the same way so all text will look alike.
The Ref. no. 5 (0.8) will set the width of the letter in relation to the height.The Ref. no. 6 (0) will set how far the letter "leans over" from a vertical position.

CALCULATING PLOTTED TEXT HEIGHT

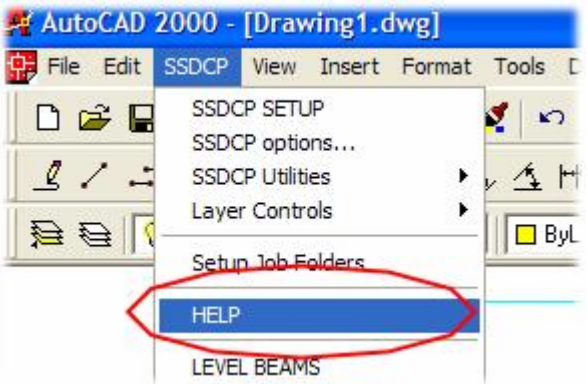
TABLE FOR CALCULATING PLOTTED TEXT HEIGHT

PLOTTED TEXT HEIGHT	0.125	0.188	0.250	0.375	0.500	0.750	1	1.50	3	DIMSCALE
DRAWING SCALE	1/8	3/16	1/4	3/8	1/2	3/4	1	1 1/2	3	
1/16	2'-0	3'-0	4'-0	6'-0	8'-0	12'-0	16'-0	24'-0	48'-0	192
3/32	1'-4	2'-0	2'-8	4'-0	5'-4	8'-0	10'-8	16'-0	32'-0	128
1/8	1'-0	1'-6	2'-0	3'-0	4'-0	6'-0	8'-0	12'-0	24'-0	96
3/16	8"	1'-0	1'-4	2'-0	2'-8	4'-0	5'-4	6'-8	13'-4	64
1/4	6"	9"	1'-0	1'-6	2'-0	3'-0	4'-0	6'-0	12'-0	48
3/8	4"	6"	8"	1'-0	1'-4	2'-0	2'-8	4'-0	8'-0	32
1/2	3"	4 1/2"	6"	9"	1'-0	1'-6	2'-0	3'-0	6'-0	24
3/4	2"	3"	4"	6"	8"	1'-0	1'-4	2'-0	4'-0	16
1	1 1/2"	2 1/4"	3"	4 1/2"	6"	9"	1'-0	1'-6	3'-0	12
1 1/2	1"	1 1/2"	2"	3"	4"	6"	8"	1'-0	2'-0	8
3	1/2"	7/8"	1"	1 1/2"	2"	3"	4"	6"	1'-0	4
HALF	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	6"	2
FULL	1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	3"	1

		EXISTING BLOCK DRAWN TO THIS SCALE												
		1/16	1/8	3/16	1/4	3/8	1/2	3/4	1	1 1/2	3	HALF	FULL	
DRAWING SCALE	1/16	ONE	2	3	4	6	8	12	16	24	48	96	192	
	1/8	.5	ONE	1.5	2	3	4	6	8	12	24	48	96	X AND Y SCALE FACTORS
	3/16	.3333	.6666	ONE	1.33	2	2.66	4	5.33	8	16	32	64	
	1/4	.25	.5	.75	ONE	1.5	2	3	4	6	12	24	48	
	3/8	.166	.3333	.5	.6666	ONE	1.33	2	2.66	4	8	16	32	
	1/2	.125	.25	.375	.5	.75	ONE	1.5	2	3	6	12	24	
	3/4	.083	.166	.25	.3333	.5	.6666	ONE	1.33	2	4	8	16	
	1	.0625	.125	.1875	.25	.375	.5	.75	ONE	1.5	3	6	12	
	1 1/2	.0416	.083	.125	.1666	.25	.3333	.5	.6666	ONE	2	4	8	
	3	.0204	.0625	.0625	.0833	.125	.1666	.25	.3333	.5	ONE	2	4	
	HALF	.0104	.0416	.0312	.0416	.0625	.0833	.125	.1666	.25	0.5	ONE	2	
	FULL	.0052	.0204	.0156	.0208	.0312	.0416	.0625	.0833	.125	0.25	0.5	ONE	

SSDCP Manual





This will start the online help system.

SSDCP Manual

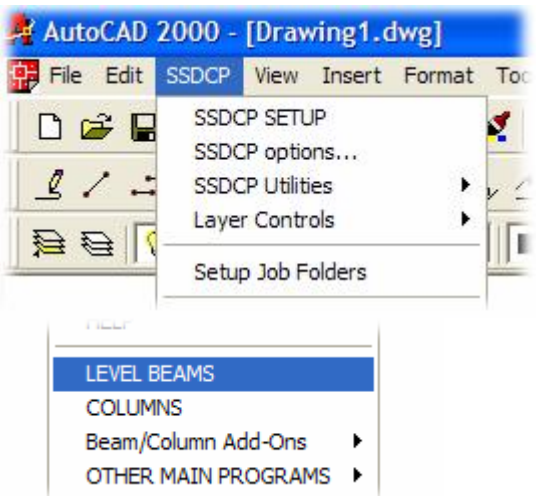


LEVEL BEAMS

DESCRIPTION

When you first load this program, you will be required to setup the global questions to suit the way you want beams to be detailed on the current sheet. It would be wise if you go thru each question, so you will know what they control. You will have the option to change these between every beam detail. The answers will be written to the hard drive in a file called "BEAM.GQU." Depending on how you answer these questions, these will have a direct bearing on what questions are asked in the program, when it is run. Try to group beams that are similar, on one sheet. This will eliminate some questions when the program runs.

COMMAND



OPTIONS

A. END OF BEAM CONNECTIONS

1. Clip angles (both sides, near side or far side) ("safety" connection provided if

5. Plain ends
6. Clips can be welded or bolted. Holes in bolted clips will be staggered if req'd only at WF cols.
7. Gages in clips will be adjusted for channels (optional)
8. Standard or custom clip angle marks (optional)

B. INTERNAL CONNECTIONS

1. Top or bottom flange holes
2. Open holes or 4 different type of shear bars in webs.
3. Stiffeners drawn and sized.
4. Running dimensions from beam to beam can be above or below beam.
5. Stub dimensions to 1st hole only, or every row of holes or bars.
6. Holes drawn in web or bottom flanges for horizontal bracing connections. (Level only)

C. MISCELLANEOUS CONNECTIONS

1. Wood holes shown and noted in top or bottom flanges.
2. Handrail holes or bars in web of beam. (Level only)

D. DIMENSIONING

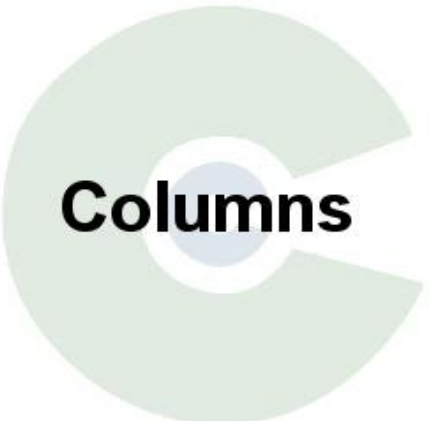
1. All dims. can be from end of beam or face of clip angles
2. Calculates all minus dims, block sizes, and stub dims.

If you are dealing with a channel, any references in the program to "C/L" will logically mean to "BACK" of channel.

DRAWING SCALE: 1"=1' or MM equivalent TO RUN:

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. So be careful on your inputs…. watch the command area on the monitor for questions and dimension inputs. There will be slides shown to assist you on inputs. Just do what the program asks you to do.

SSDCP Manual



COLUMNS

COMMAND



OPTIONS

1. Up to 3 faces of the column can be drawn. Face "B" must always be drawn. If you have girt clips on face "A" OR "C" then those faces must be drawn.
2. 2 different ways to tie up overall dimension on column.
3. Will detail WF, S Shape, Tube Steel, Pipe or Special Columns
4. Will print compass direction on face "A" if required.

BOTTOM OF COLUMN OPTIONS

1. Base Plates with 2 or 4 holes
2. Plain
3. Open holes for splice plates

TOP OF COLUMN OPTIONS

NOTE: Cap plates will be drawn in face "B" only.

1. Cap plates with open holes or plain

INTERNAL CONNECTIONS

1. Open holes
2. Brace holes above or below beam for vertical brace connections.
3. Wing plates
4. Moment connection detail & material for bolted moment connections.
5. Different types of girt connection material.
6. Vertical bracing plate details. (vertical bracing plate program)
7. Stiffeners drawn and sized.

When you first load this program, you will be required to set up the global questions to suit the way you want columns to be detailed on the current sheet. It would be wise if you go thru each question, so you will know what they control. You will have the chance to change these between every column detail if you wish. The answers will be written to the hard drive in a file called "COL.GQU." These will be read back in for the defaults used for the next day, week, month, year, or century. Depending on how you answer these questions, these will have a direct bearing on what questions are asked in the program, when it is run.

SPECIAL NOTE PERTAINING TO PUNCHING HOLES IN WF COLUMNS

The holes punched in face "A" or "C" (flanges) for a WF column can be drawn in those faces even if you are "**only**" drawing FACE "B". However, if you choose to draw face A or C, the flange holes will be drawn in those faces. If you are NOT drawing face "C", the holes in face "C" will be put in the **right side** flange in face "B" picture. The dimensions and stubs will be to the right of face "B" picture. If you are NOT drawing the "A" face the holes in face "A" will be put in the **left side** flange of face "B". The dimensions and stubs will be to the left of face "B". The holes for web punching in face "B" are also to the left side. This could cause some conflict of dimensions overrunning other dimensions. If the Beams framing into face "A" and face "B" are at the "**same elevation**" everything should be O.K. If the beams are "NOT" at the same elevation, then you should pick 2 different locations to draw holes for face "A" and face "B".

SSDCP Manual

ENTERING ELEVATIONS

Enter "ALL" elevations that will pertain to this drawing. Example: Base Plates, top of column, beam elevation., etc, etc: These elevations will be printed on the sheet, so that you may just "PICK" these, when the program requests an elevation. This is much easier than typing these, over and over again. After you have entered all these elevation for this sheet, you could make a "Block" of these elevation to insert on next sheet of columns, so you don't have to enter these again. If you made a block of the elevation list, if you drew the elevations on this bldg., you can insert this block on this sheet before you start to run this program. (explode block)

NOTE: While the program is running and you "missed" entering an elevation, pick a "blank" area on sheet and the program will ask for you to "enter" the elevation. This elevation will be used and also added to the list, so you don't have to enter it again.

WING PLATE INFORMATION

As you can see by the manual, if you have several different wing plates at the same elevation, the pictures can overrun each other and make it very confusing. There is no way the computer can know in advance what the conditions might be. Therefore the program will let you decide where you want to draw each wing plate so there won't be overlap of pictures. Even if the elevations are the same, you must draw plates at different locations on column for clarity.....

MOMENT CONNECTION INFORMATION

The program will only draw a "field welded" moment connection framing into a column web. if you have a moment connection for the flange of a column, use the wing plate portion of the program above to draw this fit- up bar.

GIRT CONNECTION INFORMATION

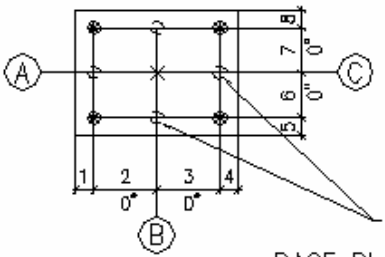
Refer to manual to decide on girt connection type number. These are blocks that will be inserted for you to manually change.

DRAWING SCALE: 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. So be careful on your inputs…. watch the command area on the monitor for questions and dimension inputs. There will be slides shown to assist you on inputs. Just do what the program asks you to do.

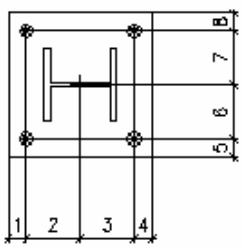
SSDCP Manual

Base Plate Input

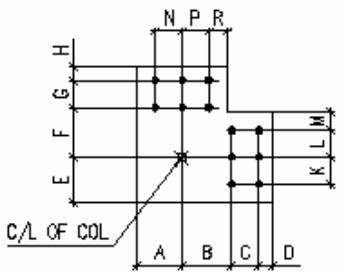


NOTES !!
IF YOU WANT THE BOLT HOLES ON THE C/L OF THE COLUMNS, ENTER A 0" DIM. FOR INPUT NO. 2 & 3 OR 6 & 7 DEPENDING ON CONDITION.

BASE PLATE INPUT

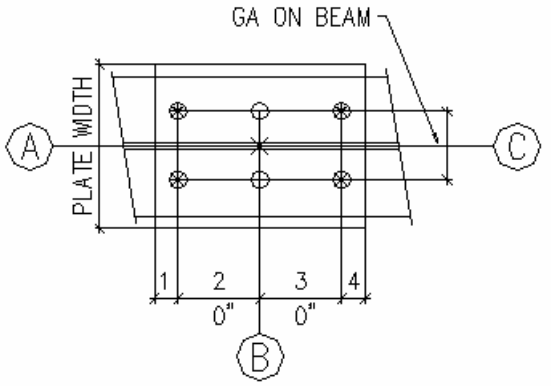


RETANGULAR BASE PLATE
TYPE 1

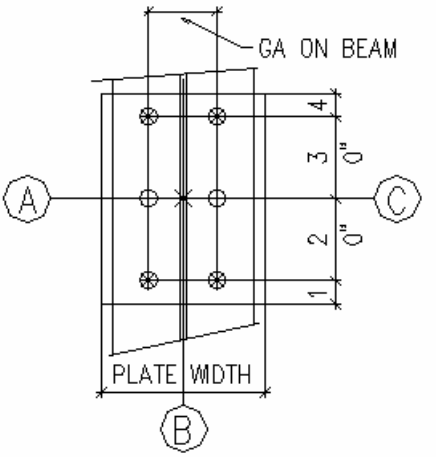


CORNER COLUMN BASE PLATE
TYPE 2

Symmetrical Cap Plate Input



BEAM RUNS LEFT TO RIGHT
FIGURE #1



BEAM RUNS UP AND DOWN
FIGURE #2

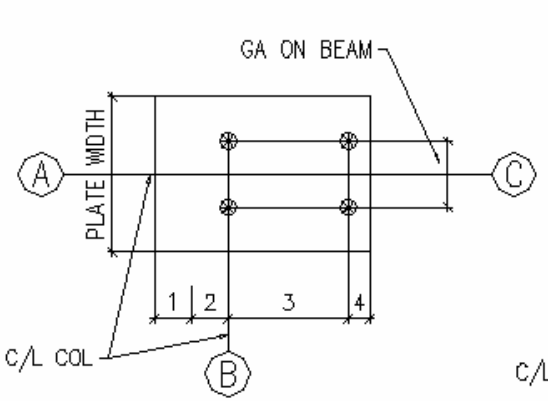
NOTES !!
IF YOU WANT THE BOLT HOLES ON THE C/L OF THE COLUMNS, ENTER A 0" DIM. FOR INPUT NO. 2 & 3.

SYMMETRICAL CAP PLATE INPUT

SSDCP Manual

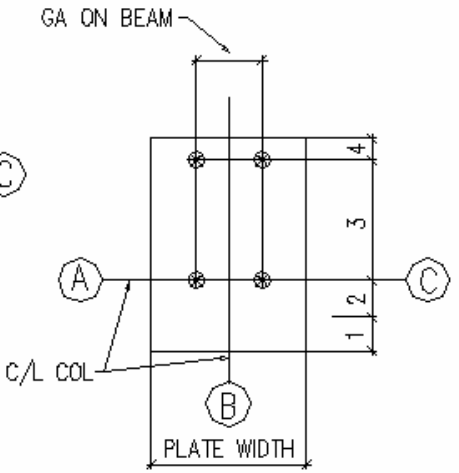
Offset Cap Plates

SSDCP Manual

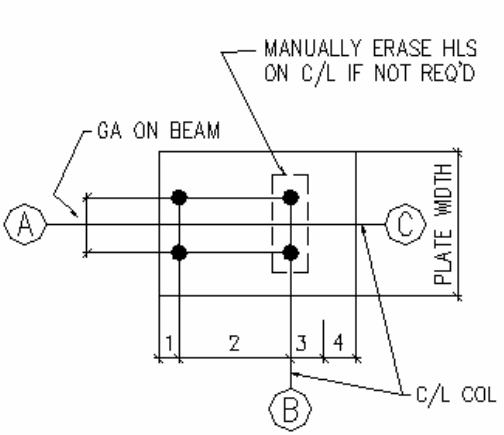


BEAM RUNS LEFT TO RIGHT
FIGURE #1

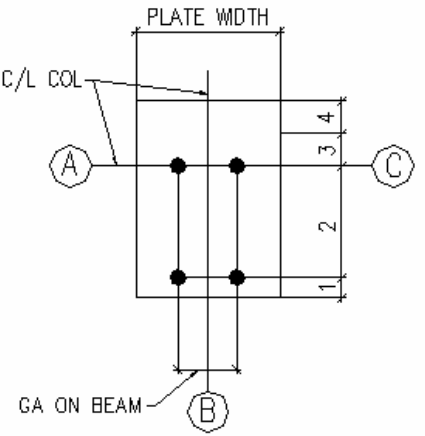
EXAMPLE INPUTS:
ENTER DIM 1: 6"
ENTER DIM 2: 0"
ENTER DIM 3: 7½"
ENTER DIM 4: 1¼"
ENTER PLATE WIDTH: 9"
ENTER GA. ON BEAM 3½"



BEAM RUNS UP AND DOWN
FIGURE #2



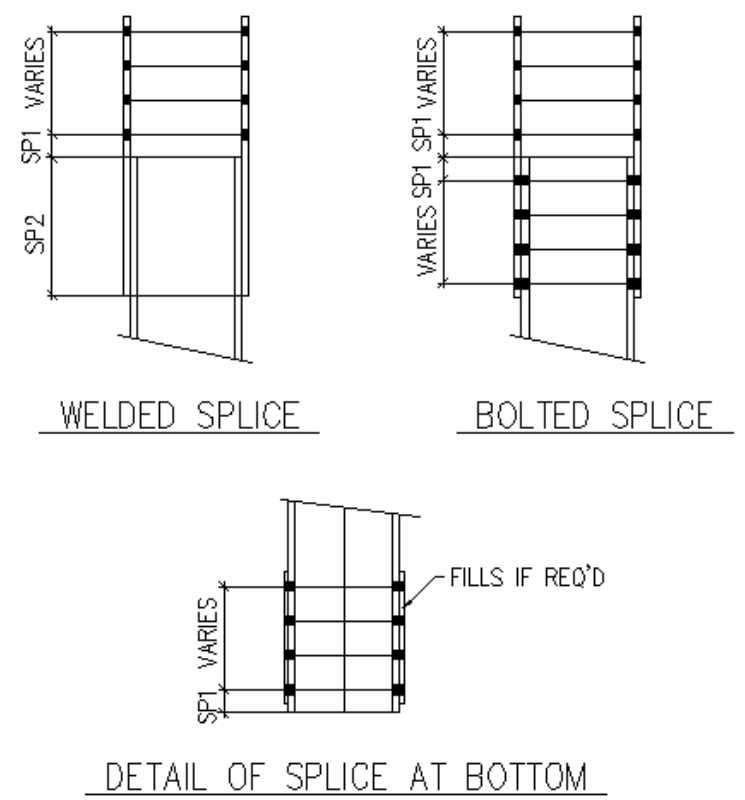
BEAM RUNS LEFT TO RIGHT
FIGURE #1



BEAM RUNS UP AND DOWN
FIGURE #2

DETAILS OF OFFSET CAP PLATES

Column Splice Details



Wing Plate Details

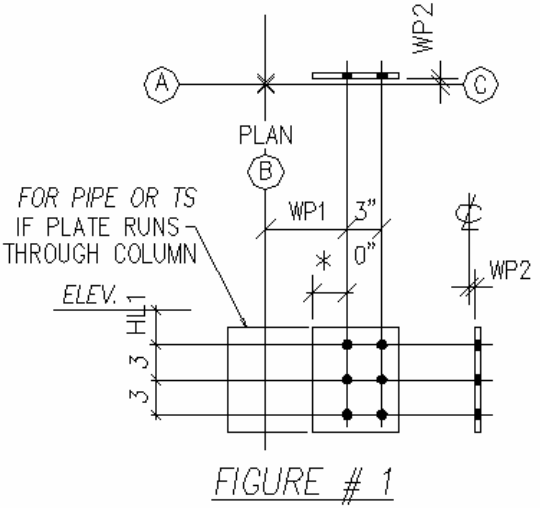


FIGURE # 1

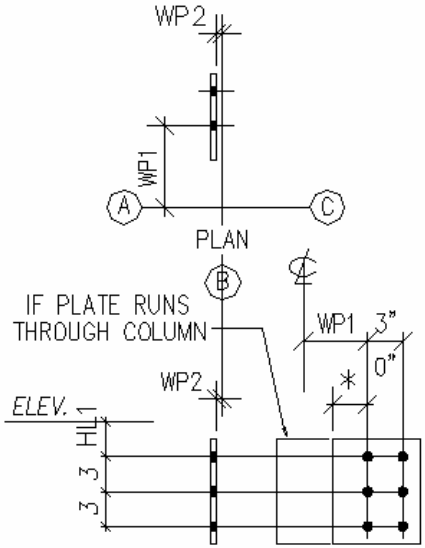
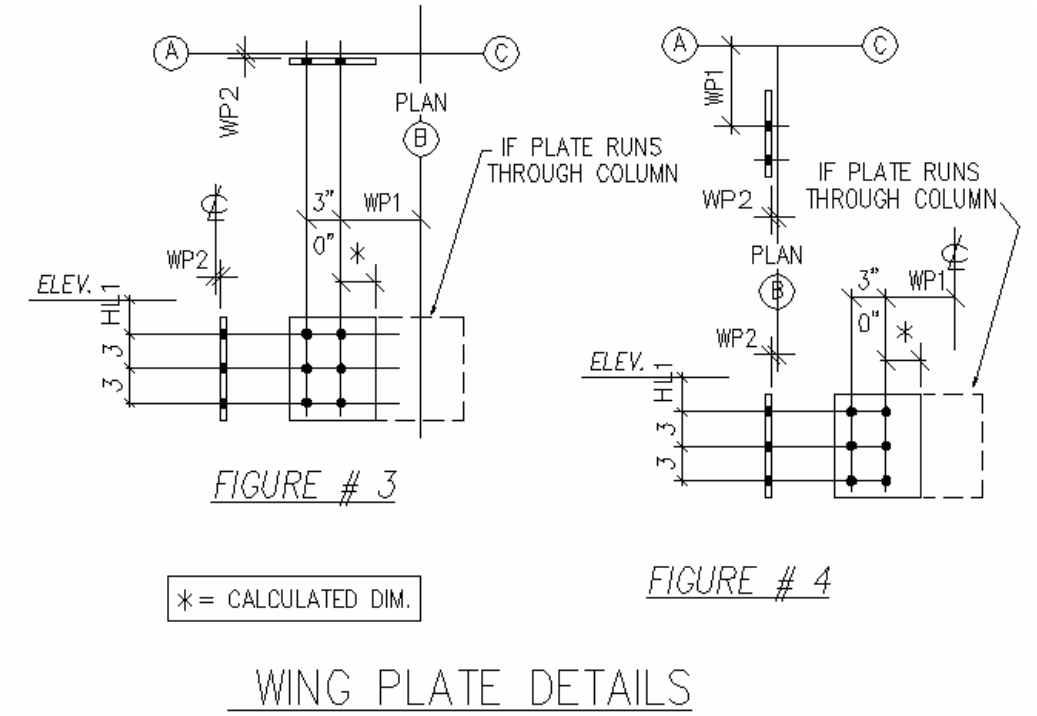
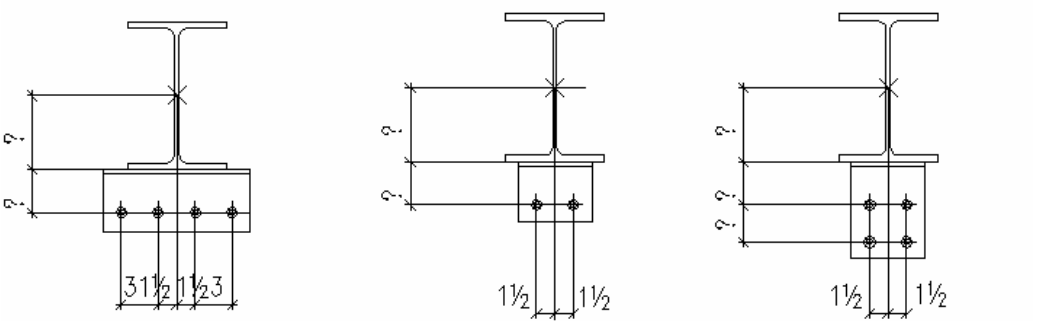


FIGURE # 2

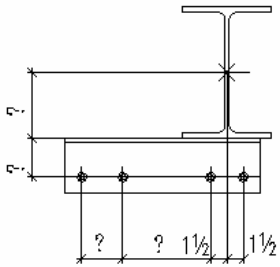
NOTE:
WILL DRAW ANY NO. OF ROWS OF HOLES
WITH ONE OR TWO COLUMNS OF HOLES.



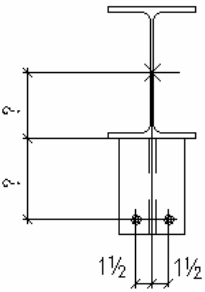
Girt Connection Details to Columns



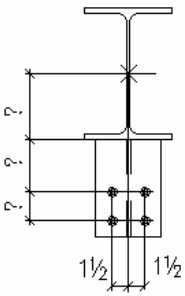
SSDCP Manual



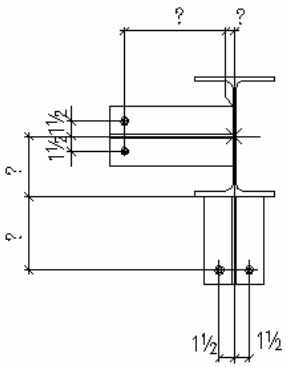
GIRT CLIP TYPE #4



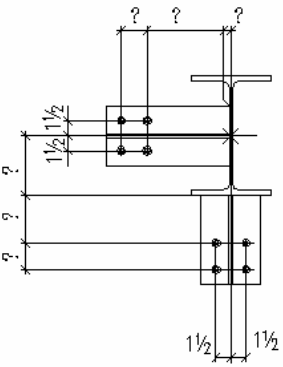
GIRT WT CLIP TYPE #5



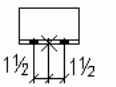
GIRT WT CLIP TYPE #6



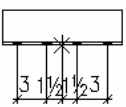
GIRT WT CLIP TYPE #7



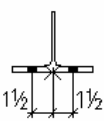
GIRT WT CLIP TYPE #8



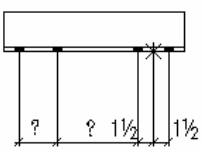
GIRT CLIP TYPE #9



GIRT CLIP TYPE #10



GIRT WT CLIP TYPE #11



GIRT CLIP TYPE #12
MIRROR IF REQ'D

Beam /Column Add-Ons

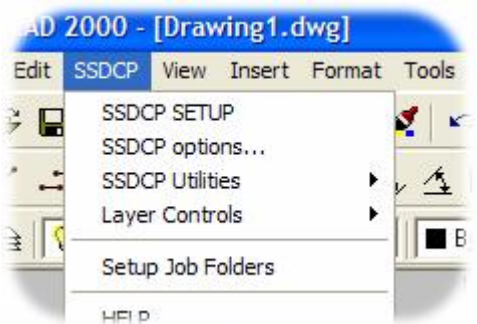
SSDCP Manual

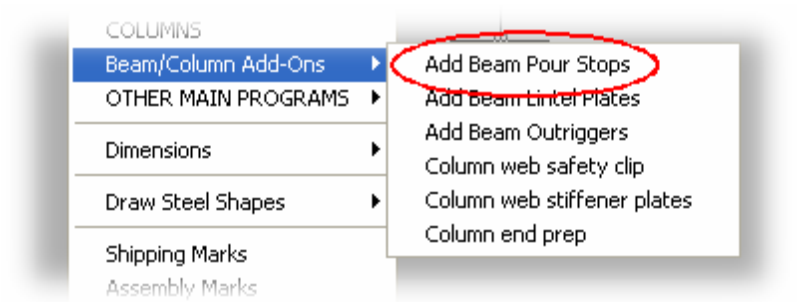
Pour Stop

DESCRIPTION

This program will allow you to add a pour stop (screed plate) to the top flange of your beam or tee. It allows you to construct the pour stop by entering information in a dialog box. There are options to draw a top view and a section view of the plate or angle.

COMMAND

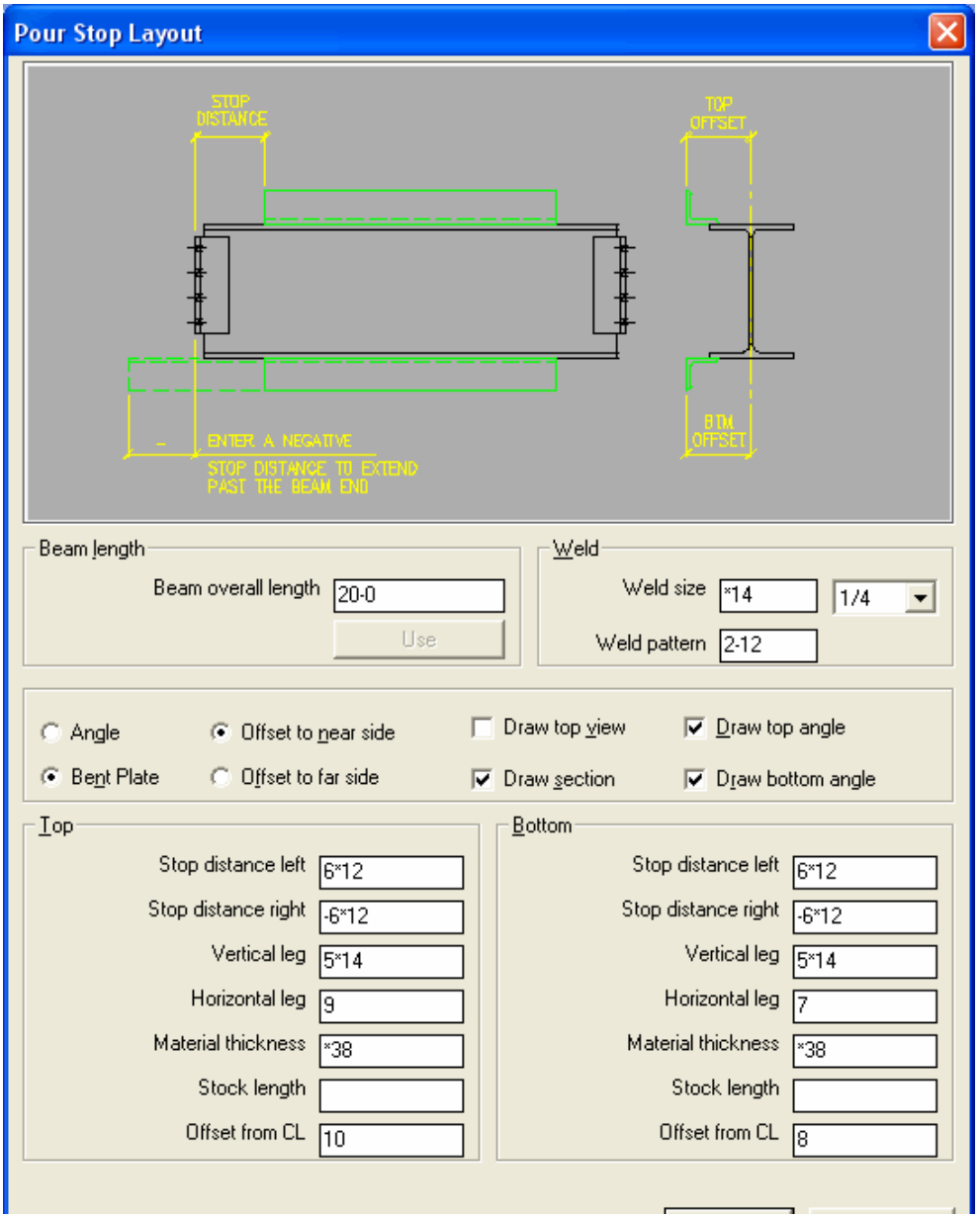




The pour stop program has been enhanced to make adding angle or bent plate screed material to your details easier. The dialog is very user friendly. You just

use a new feature to SSDCP that once the program draws your material on the detail, it will allow you to drag the dimensions where you want them or need them to miss other dimensions. You are able to see where these dimensions are going at all times while you are dragging it. See explanation of each below the image.

SSDCP Manual



The next time you use the lintel program, the last entered length will be shown. If you want to use that length, click "Use".

Weld Group This will apply the weld you specify to your section. You can use the dropdown list to select your weld size. You can add a weld pattern if needed (i.e. 2-12, 2-8)

Angle/Bent Plate Radio button to choose either Angle or Bent Plate. This will determine what types of dimensions are shown in your section if you choose that option. Bent plate shown in your section will have bend dimensions shown.

Offset

This radio button allows you to choose whether your plate is offset to the near side or far side. If your plate is centered, you may choose either one.

Drawing Instructions The checkboxes allow you to choose how you want your plate shown. You can have it draw a top view, if needed. If you want the angle or bent plate shown in your existing section, check the draw section box. There are two checkboxes that allow you to choose which flange the angle or bent plate is drawn on. You can choose one or the other or both. When you check a box, the textboxes located at the bottom of the slide for top and bottom will be enabled or disabled according to your choice.

Top or Bottom Plate Entries

Stop distance left Enter a positive number to hold back from the end of assembly or a negative number to extend past the end of the beam.

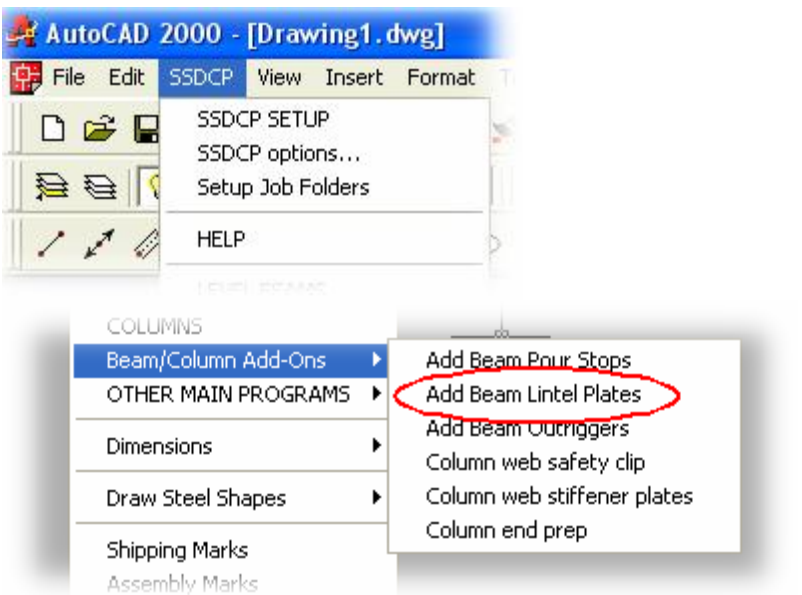
Stop distance right Enter a positive number to hold back from the end of assembly or a negative number to extend past the end of the beam.

Vertical Leg Enter the vertical dimension of your angle or bent plate

Horizontal Leg Enter the horizontal dimension of your angle or

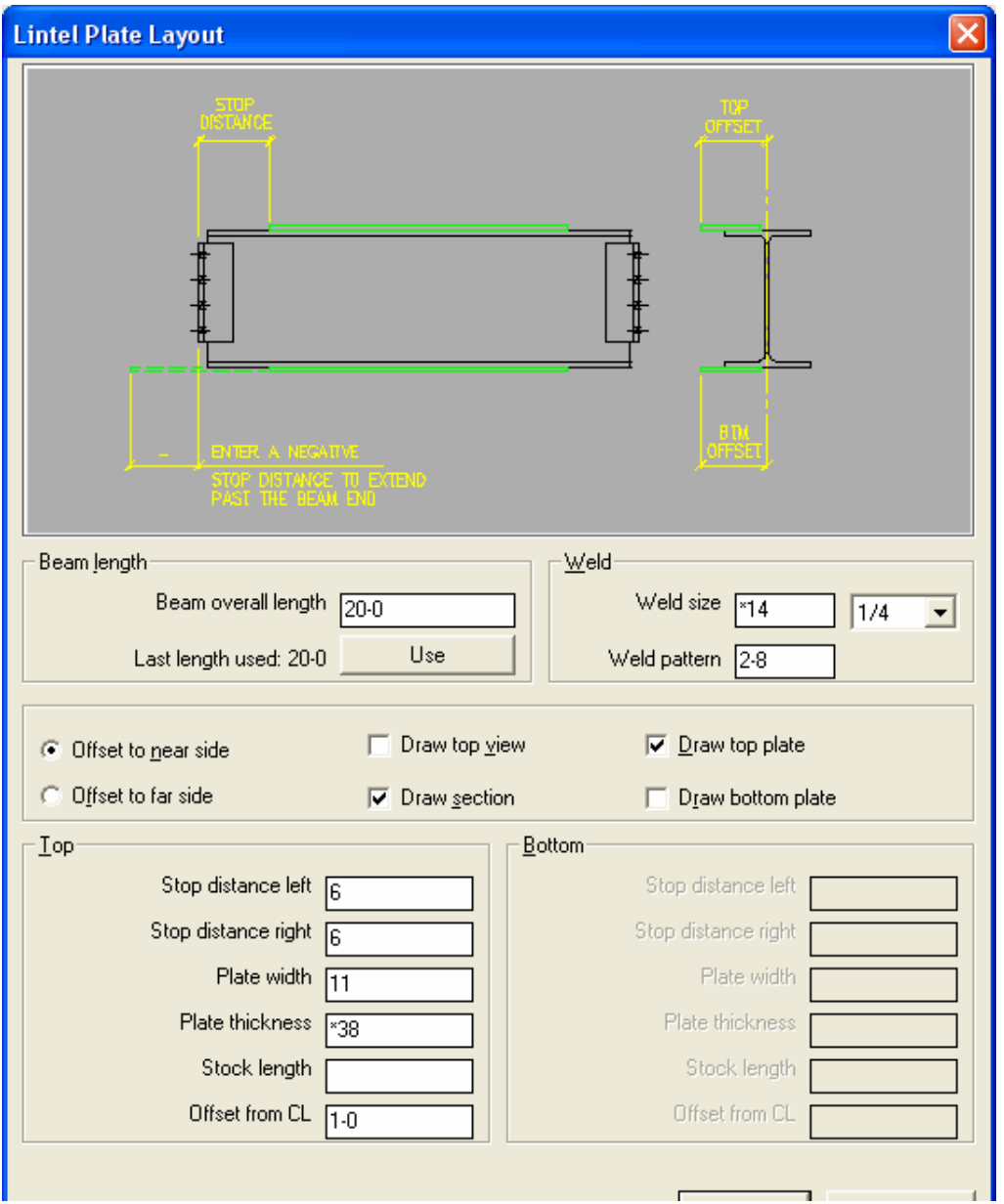
	plate, you may enter it here. This is not a required number.
Offset from CL	This will the distance from beam center line to the edge of your plate or angle.

Add Beam Lintel Plates



SSDCP already has a lintel program; this new program adds lintel plates to structural beams. The dialog is very user friendly. You just place checks in the checkboxes beside the way your detail should look and enter the required numbers. Note that this example is showing the numbers entered with CVSpro input style. Your input will depend upon your setting in SSDCP options. This program and the pour stop program use a new feature to SSDCP that once the program draws your material on the detail, it will allow you to drag the dimensions where you want them or need them to miss other dimensions. You are able to see where these dimensions are going at all times while you are dragging it. See explanation of each below the image.

SSDCP Manual



SSDCP Manual

Beam Length
Enter the point-to-point length of your beam. The next time you use the lintel program, the last entered length will be shown. If you want to use that length, click "Use".

Weld Group This will apply the weld you specify to your section. You can use the dropdown list to select your weld size. You can add a weld pattern if needed (i.e. 2-12, 2-8)

Offset This radio button allows you to choose whether your plate is offset to the near side or far side. If your plate is centered, you may choose either one.

Drawing Instructions The checkboxes allow you to choose how you want your plate shown. You can have it draw a top view, if needed. If you want the plate shown in your existing section, check the draw section box. There are two checkboxes that allow you to choose which flange the plates are drawn on. You can choose one or the other or both. When you check a box, the textboxes located at the bottom of the slide for top and bottom will be enabled or disabled according to your choice.

Top or Bottom Plate Entries

Stop distance left Enter a positive number to hold back from the end of assembly or a negative number to extend past the end of the beam.

Stop distance right Enter a positive number to hold back from the end of assembly or a negative number to extend past the end of the beam.

Plate Width Enter the actual width of your plate.

Plate Thickness Enter the thickness of the lintel plate.

Stock Length If your chop or client uses stock lengths for plate, you may enter it here. This is not a required number.

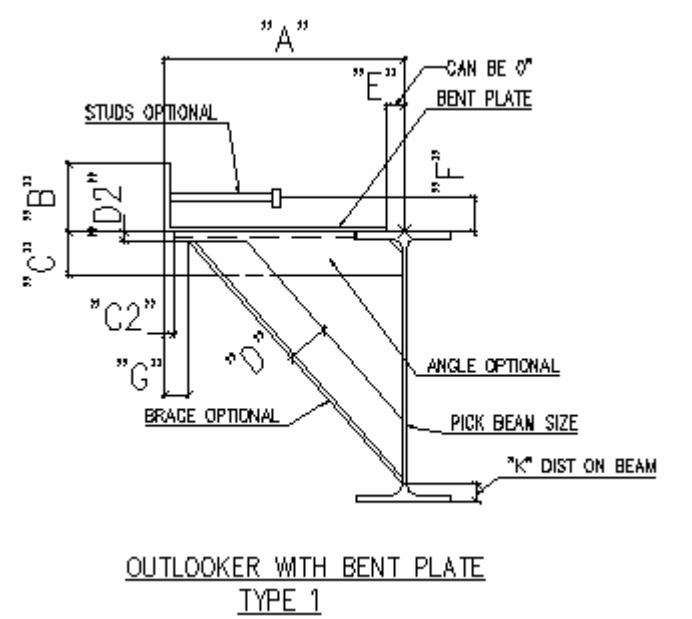
Offset from CL This will the distance from beam center line to the edge of your plate.

SSDCP Manual

ADD BEAM OUTRIGGERS

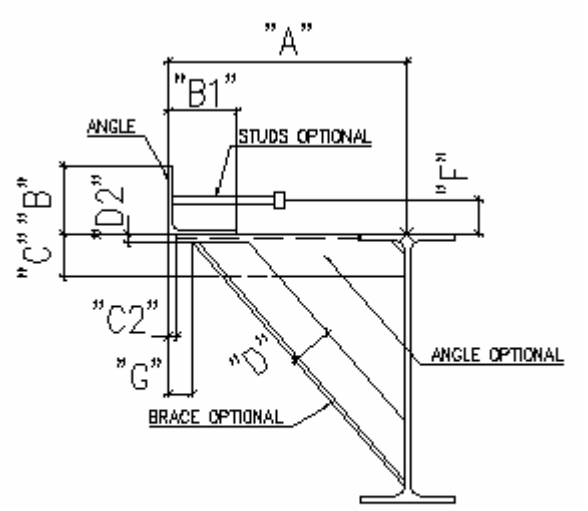
This routine will draw outrigger details on beams. You have the following options:
1. Either bent plates or angles
2. The brace is optional
3. The horizontal angle is optional.
4. The studs and spacing are optional.

You can use the SSDCP programs to draw the continuous angle or bent late, then copy the front view to any locations you choose. You will have to dimension the details to suit yourself. If you use the "green" node point to copy the side view, this will be the top flange of the beam.



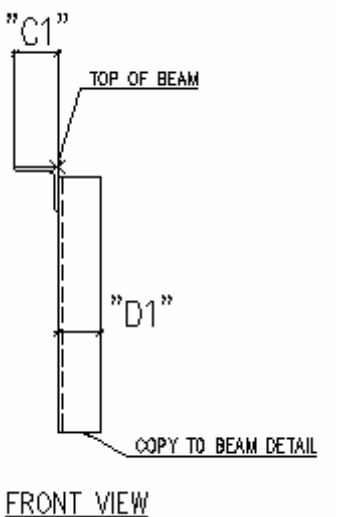
OUTLOOKER WITH BENT PLATE
TYPE 1

The dimensions C2, D2, G and E can be entered as 0" if required.



OUTLOOKER WITH ANGLE
TYPE 2

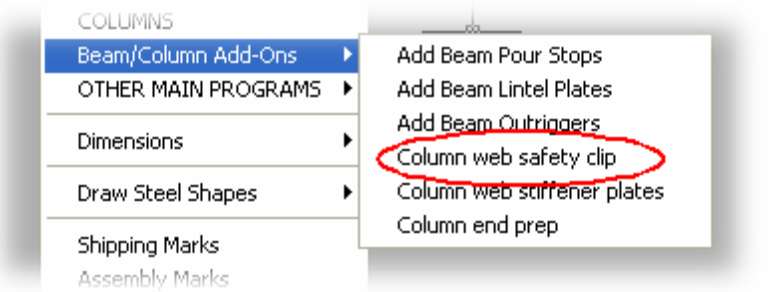
The dimensions C2, D2, G and E can be entered as 0" if required.



FRONT VIEW

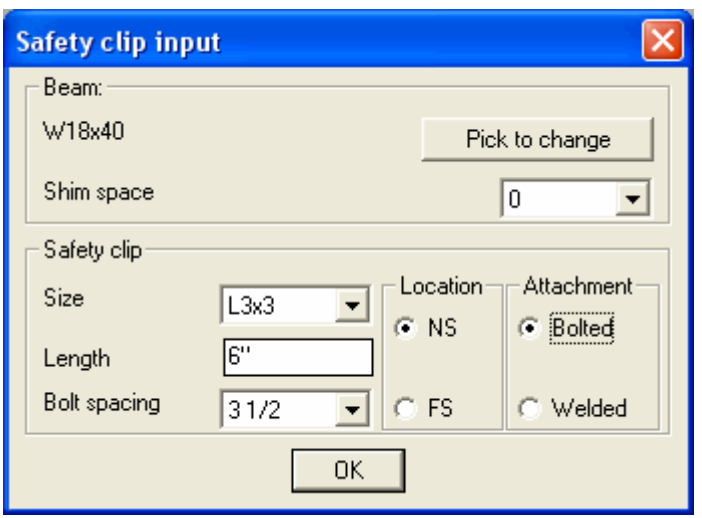
SSDCP Manual

COLUMN WEB SAFETY ANGLES



With the new OSHA requirements, detailers may opt to use angles in the column web to achieve the safety connection.

After you issue the command, you can set your needed information in this dialog box:

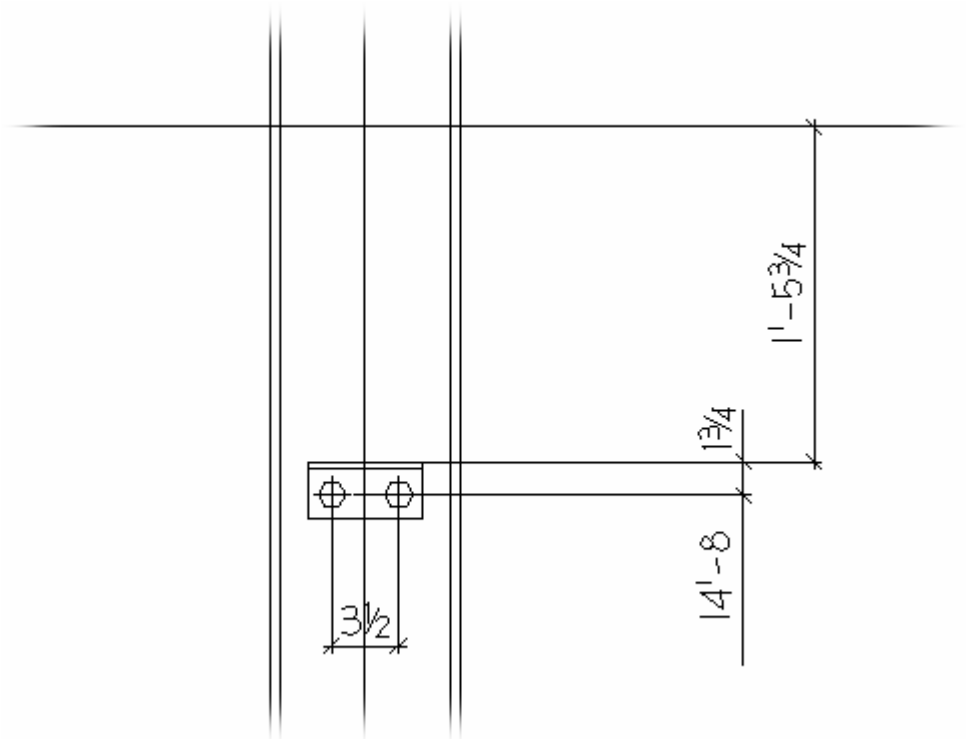


1. Pick your beam size (uses the standard SSDCP shape selection dialog)
2. Set your shim space, if any.
3. Choose your angle size, the length of the angle and the cc distance in your web.
4. Set whether the angle occurs on the NS or FS of column web.

SSDCP Manual

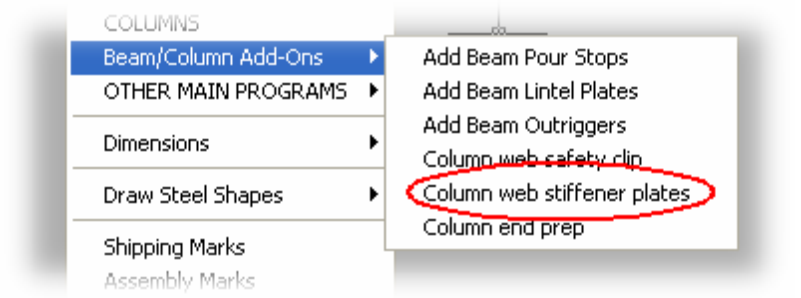
After your make all your selections in the dialog box, you will be asked to select the top of steel at the column centerline. After the angle and dimension lines are drawn, the program will ask you for the stub dimension to the top of steel and the program will calculate the stub dimension to the bolted connection. If it is a welded connection, after you pick the top of steel, it will draw the angle and add a 3-sided weld to the detail.

Example of Safety Angle

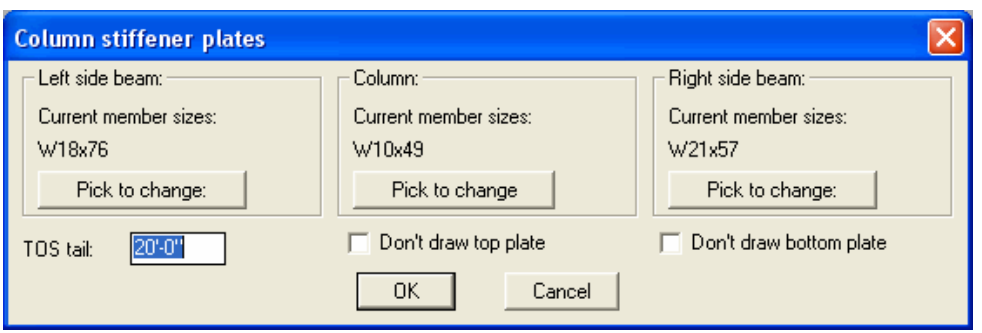


SSDCP Manual

COLUMN WEB STIFFENER PLATES

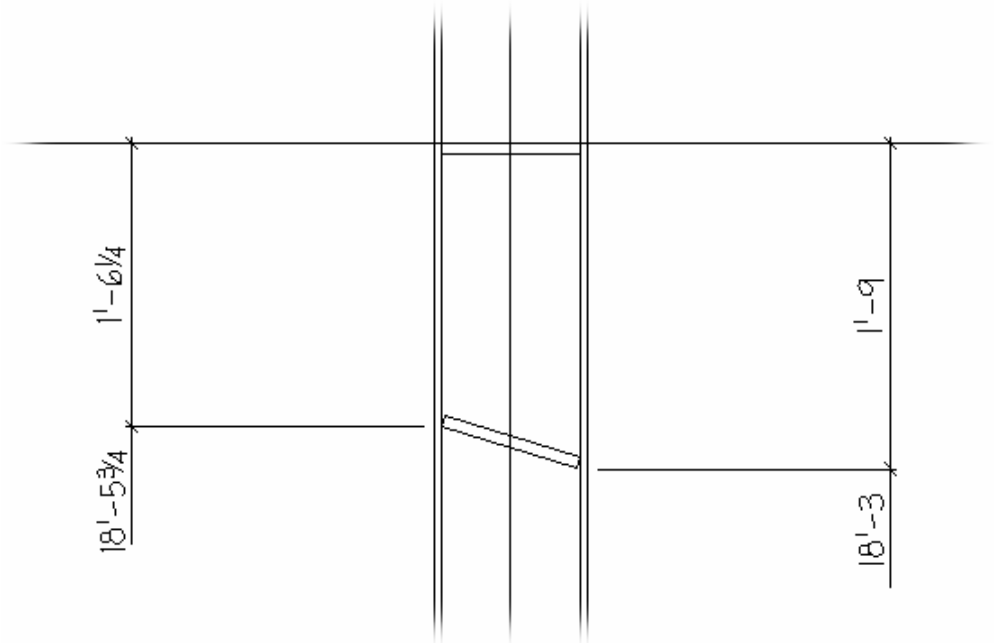


A moment connection often means column web stiffeners. After you choose the command to add these stiffeners the dialog box will allow you to add the needed information so SSCP can draw them in your existing column.

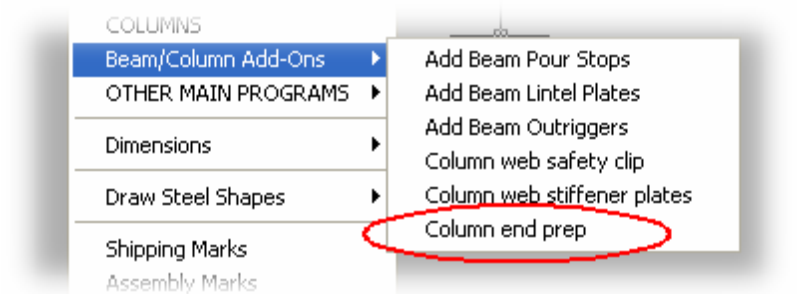


This dialog box allows you set exactly how you wish to have the column stiffeners appear. Select the sides that the beams frame in, and choose the beam size. Note that the routine will draw the bottom stiffener at an angle if the beams are different depths. You can select if the routine does not draw top or bottom plates, it does draw them by default. You also need to enter your stub dimension so the routine can calculate the stub dimension.

Example of Column Web Stiffener



Column End Prep



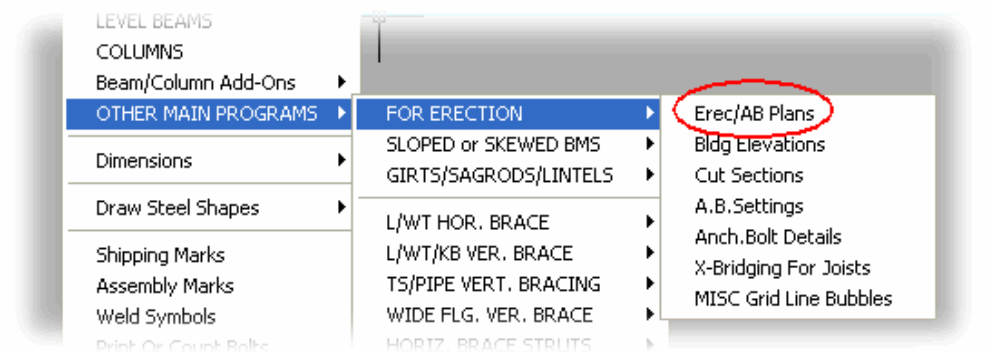
This command will draw prepared ends on your column.


Other Main
Programs

SSDCP Manual

ERECTION PLANS

COMMAND



DESCRIPTION

The best way to use this program is to draw the anchor bolt plan first. After you are through with the anchor bolt plan, save this sheet with a new drawing name (Ex. 300-E1). Then bring up this drawing (300- E1) and tell the program that you are using an existing anchor bolt plan. At this time, the program will turn off the CLA layer which is the C/L of columns and the type numbers. These items will no longer be required. The program will only ask where the columns are and the sizes of beams or joists to be added for erection purposes.

The program will draw the beams and/or joists anywhere you want to scale. However, because the program will not know in advance the conditions that could develop as you add beams or joists, it will not dimension these beams or joists as they are drawn.

When the program is complete, use the standard AutoCAD dimension commands to dimension the beams to suit the situation and locate the dimension lines in clear areas that you have on the sheet. Because the beams are located to scale, you can accept all dimensions that are provided by this method.

As this program develops the drawing, you will note green X's (node points) drawn at C/L of columns and beams. You can use these points to dimension to or from. Just set your

SSDCP Manual

As with any program, you need to use the array or copy standard AutoCAD commands when possible. This saves time if other bays have the same conditions as the one you just drew. Think about this, and do a little planning before you start drawing.

If you have an entire building that is on any angle other than 0 and 90 degrees, draw the plan square on sheet. After the plan is complete, use AutoCAD command "rotate window", and rotate entire plan to any angle you choose.

If you are going to draw a metal decking layout sheet, you should save the erection drawing under another name to be used to draw the layout sheet for the decking. As this drawing is drawn to scale, it is very simple to layout the decking sheets on this drawing.

OPTIONS:

1. Will draw and put bubbles on all column grid lines.
2. Will draw beams or joists on C/L of columns.
3. Will draw beams or joists in any interior bays.
4. The anchor bolt plan will indicate anchor bolts in plan that are not symmetrical for all TS or pipe columns so that the contractor will not set anchor bolts in the wrong direction.
5. Will let you select column and beam sizes from sidebar menu.
6. You may add any note to beams in plan (Ex (+2 ½)).
7. Will ask about column "type numbers" and orientation.

NOTE: The "type numbers" refer to the type of anchor bolt setting that you will draw using the Anchor Bolt Settings" program. You will have to draw these on another sheet at a 1"=1' scale. If you want, you can make blocks from these details and insert them on the anchor bolt plan. Use the "conversion chart for inserting blocks" in the manual for the X and Y scale values. See manual for anchor bolt setting documentation.

8. Use the icons for erection for inserting two different types of north- south arrows for direction.
9. The size of the column pictures will be larger than normal to show correctly at the smaller scale.
10. You may select any direction to draw wide flange and non- rectangular tube steel columns.
11. The program will not draw a beam or a joist on an angle. You will have to do this manually after the program is complete.
12. Will draw lines of "bridging" in bays that contain joists.

SSDCP Manual

DRAWING SCALE: 1/8" OR 1/4" = 1' or MM equivalent

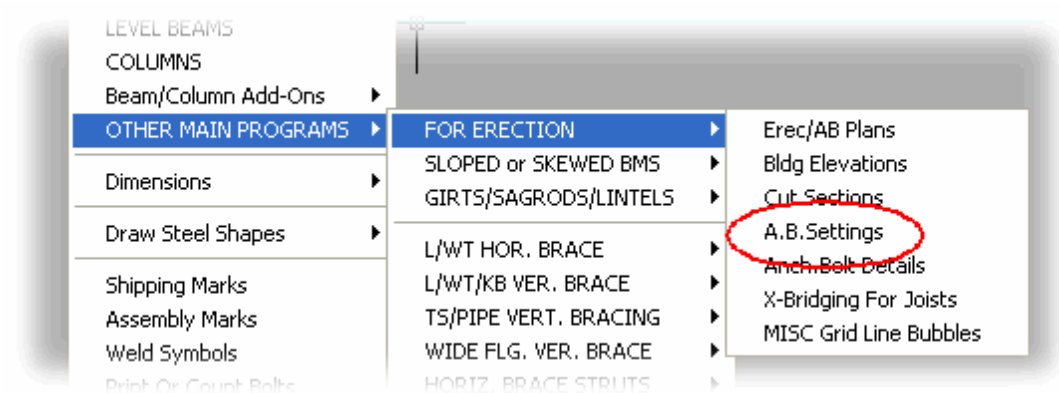
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.

ANCHOR BOLT SETTINGS

DESCRIPTION

This program draws anchor bolt setting details for wide flange, tube or pipe columns. The program will draw 2 or 4 hole plates, rectangular or square or offset plates. It will not draw a setting with only 3 holes, but you can manually fix the detail to accommodate this condition very easily.

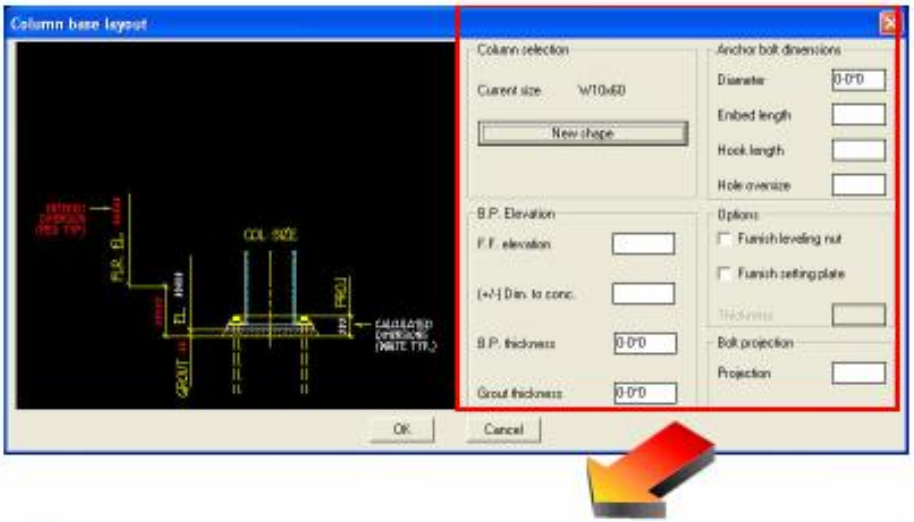
COMMAND

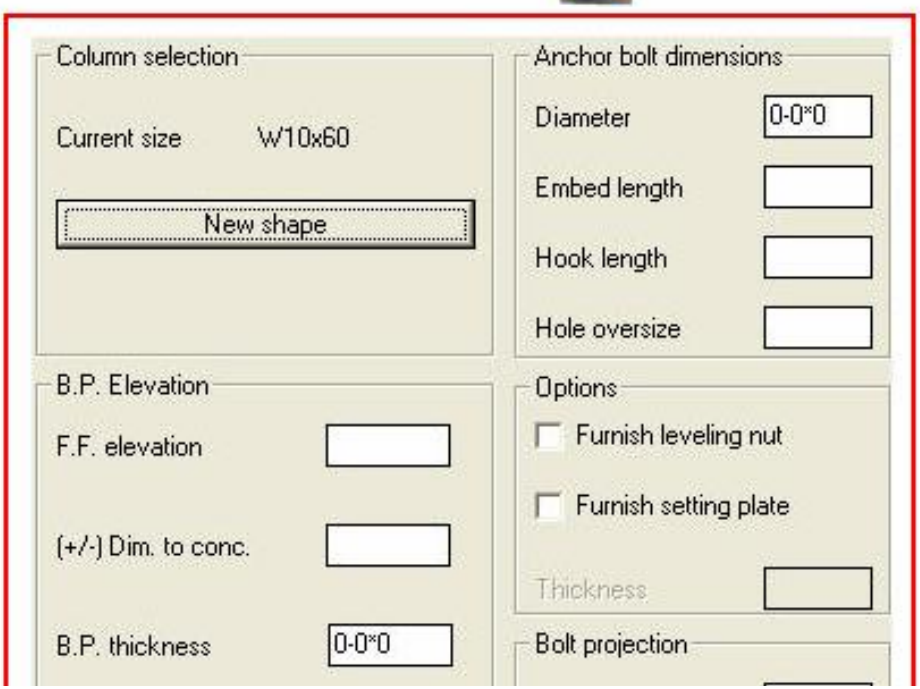


You can easily detail anchor bolt settings now with this user-friendly dialog. By entering your dimensions in the textboxes and selecting options, such as leveling plate or leveling nuts, all your needed information can be used (and retained) to

SSDCP Manual

SSDCP Manual





SSDCP Manual

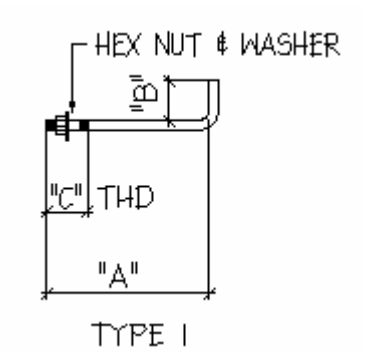
Column Selection	This textbox will show the column that is currently selected. If you need to change the size or type of column, click on "New Shape". The standard SSDCP Shape selection dialog box will allow you to choose the shape.
Base Plate Elevation	This group of textboxes is where you will enter finished floor elevations, dimension to top of concrete, base plate and grout thickness. SSDCP will calculate the bottom of base plate dimension based on these entered dimensions.
Anchor Bolt Dimensions	This group of textboxes is where you define your anchor bolts dimensions. The program will give you the opportunity to detail your anchor bolt after it draws the setting. It will use these dimensions for the detailing of the anchor bolt.
Options	You can choose to use a leveling nut or a leveling plate. If you choose the setting (leveling) plate option the textbox for the plate thickness will be enabled so you can enter the size in.
Bolt Projection	Enter the amount of projection above the concrete. This is an over-ride if you want to add projection to the amount calculated by SSDCP.

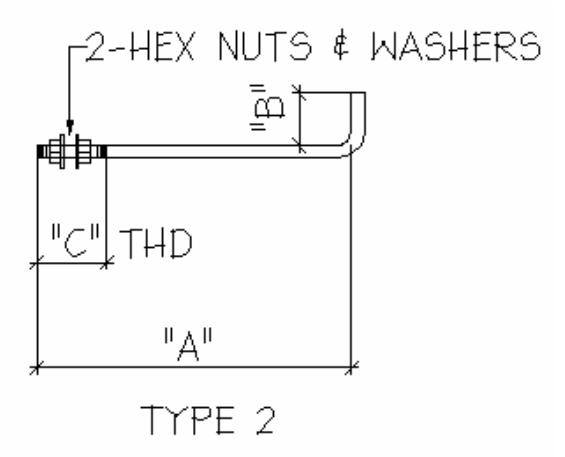
DRAWING SCALE: 1"=1' or MM equivalent

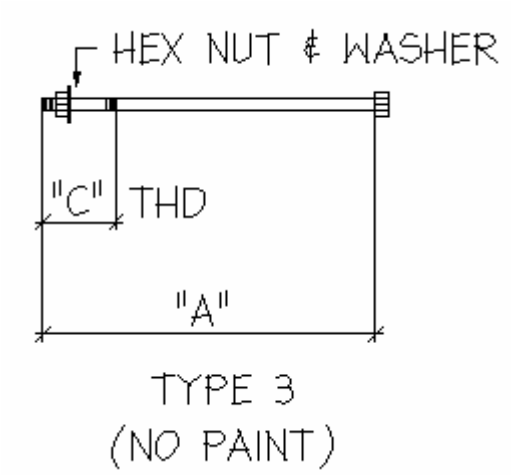
NOTE: If you want to add these details to an anchor bolt "plan" which is drawn to (ex. 1/4 t scale, you will have to draw these on another sheet at a 1" to 1' scale and then make a block these details to insert them on the Anchor bolt plan at the correct conversion number for inse blocks. (See conversion chart for inserting blocks.)

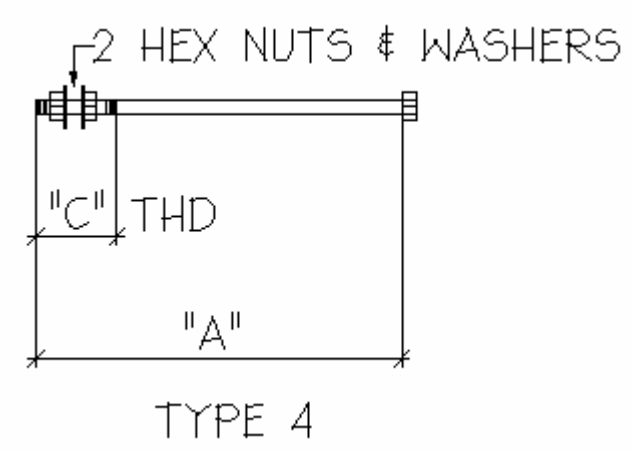
Anchor Bolt types

There are four anchor bolt types that you can detail. Types 1 and 2 are hooked and types 3 and 4 are straight rods.
Type 1 – 1 nut and washer
Type 2 – 2 nuts and washers
Type 3 – 1 nut and washer
Type 4 - 2 nuts and washers


HEX NUT & WASHER
"B"
"C" THD
"A"
TYPE 1


2-HEX NUTS & WASHERS
"B"
"C" THD
"A"
TYPE 2





X-Bridging for Joists

Draws x-bridging on erection plans by picking joists

Misc. Grid Bubbles

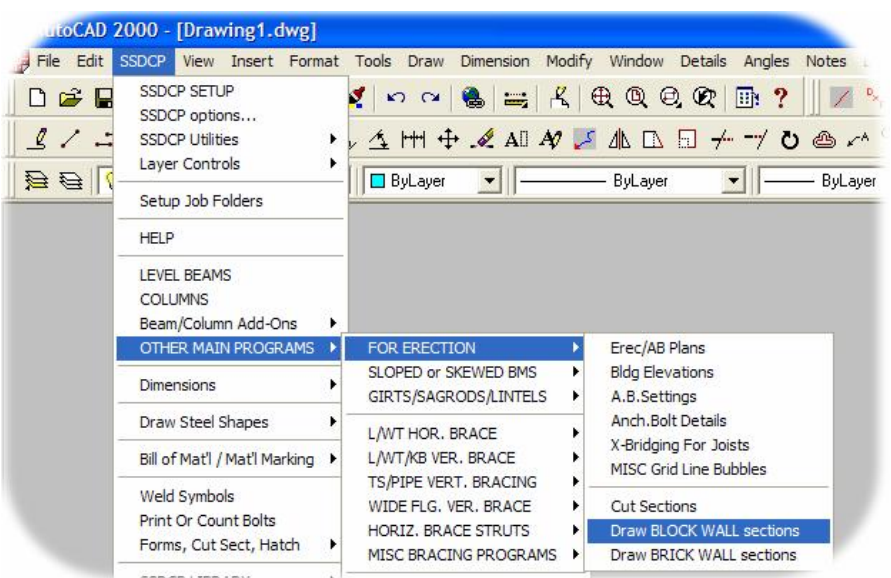
SSDCP Manual

Cut Sections

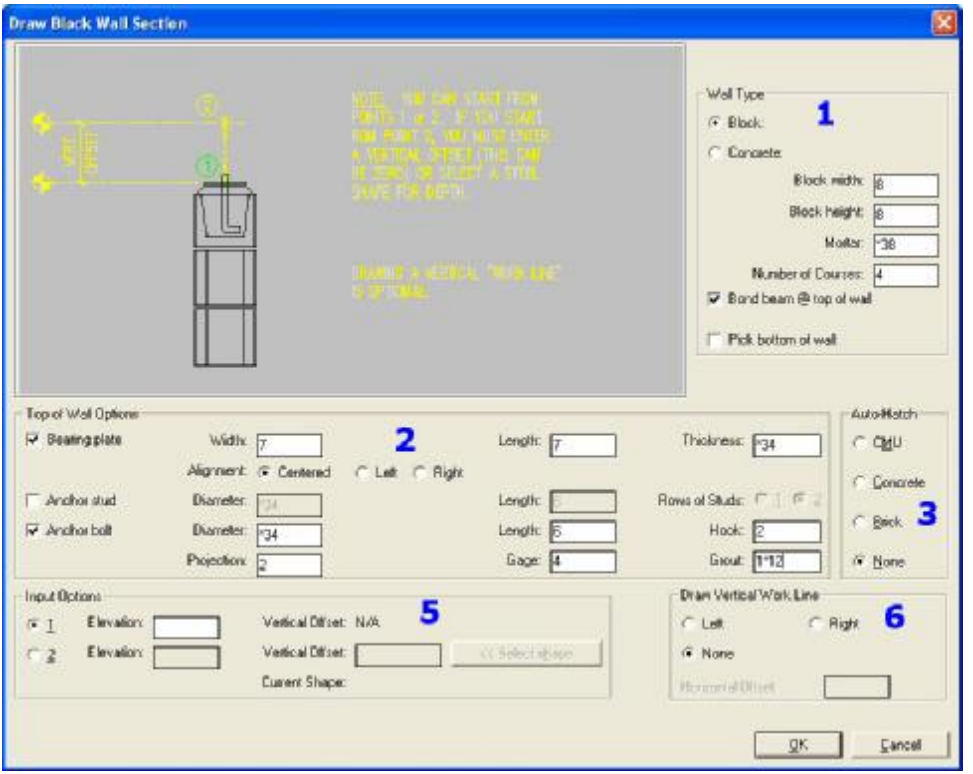
1. Pick direction of section (Left, Right, Down, Up)
2. Enter letter for section (i.e. A, B, C …..)
3. Enter erection sheet number (i.e. E1, E2, …)
4. Pick location for arrow
5. Pick the start point for section line
6. Drag the line in the direction the line is to be placed and length of line

Draw Block Wall Sections

Select SSDCP **à** Other Main Programs **à** For Erection **à** Draw BLOCK WALL sections

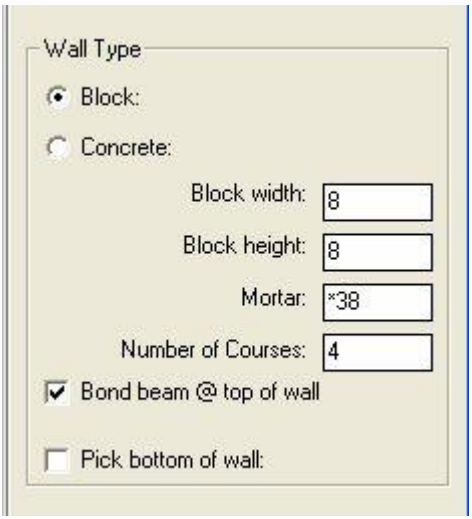


SSDCP Manual



1. **Wall Type**

SSDCP Manual



If **block** is selected:

Enter block width

Enter block height

Enter mortar thickness

Enter number of courses to be shown

If a bond beam is at the top of the wall, make sure this is checked.

If the user wants to pick where to start the bottom of the wall, make sure this is checked.

If **concrete** is selected:

Enter wall width

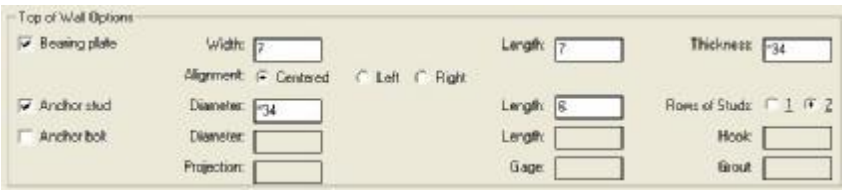
Enter wall height

Mortar thickness and number of courses are disabled

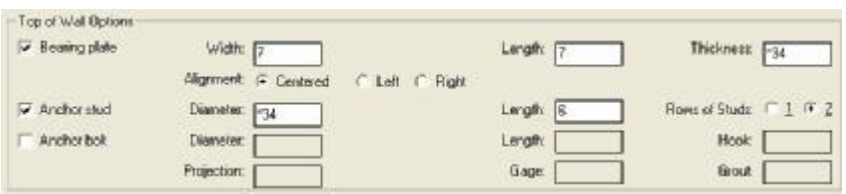
Bond beam selection is disabled

If the user wants to pick where to start the bottom of the wall, make sure this is checked.

selected as the anchorage method. If no bearing plate is selected, anchor bolts may be used.

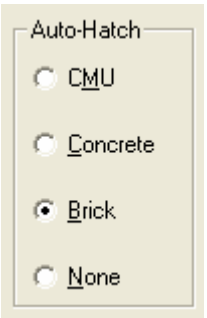


You can set the width, length and thickness of a bearing plate. The alignment of the plate can be centered on the wall or placed to the left or right edge of the wall. The example above uses anchor bolts as the anchorage method. Set diameter, projection (from top of wall), length (embedment), gage (can be “0”), hook, and amount of grout (if any).

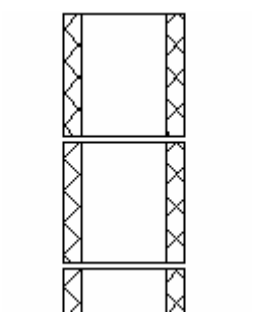


SSDCP Manual

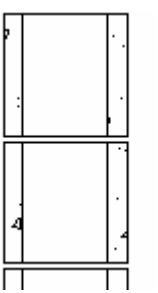
3. Block Wall Hatch



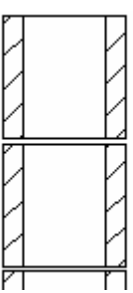
Select any type hatch to be applied on the wall



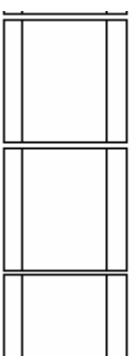
CMU Hatch



Concrete Hatch



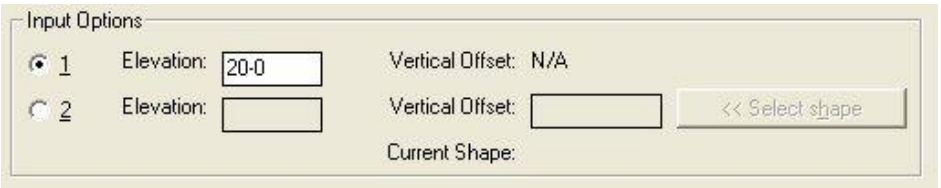
Brick Hatch



No Hatch

SSDCP Manual

4. Block Wall Input Options



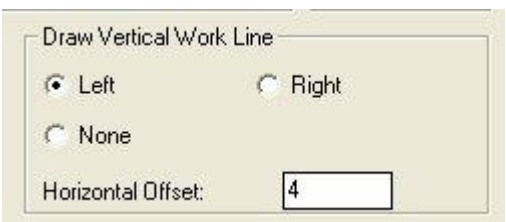
Selection 1 – elevation at the top of the wall

Selection 2 - Enter top of steel elevation and then either

a) enter dimension down to top of wall
or

b) select shape and the program will calculate the vertical offset

5. Block Wall Vertical Line

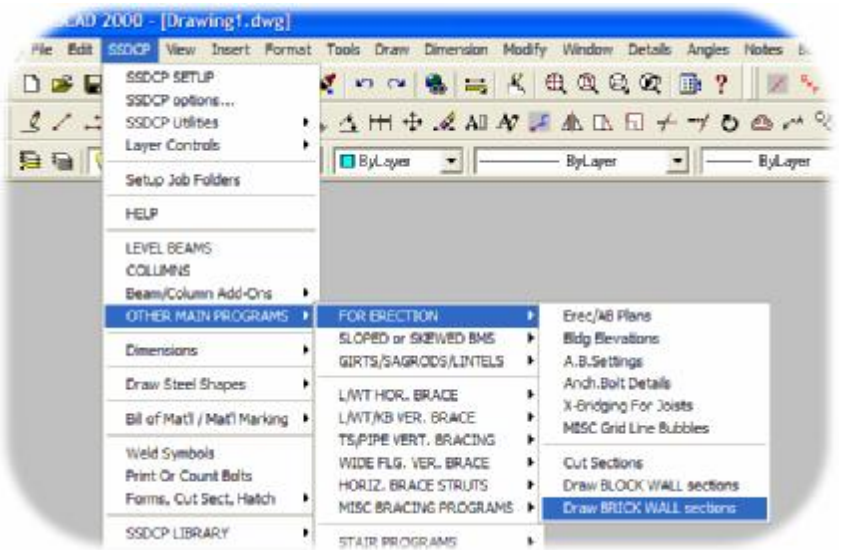


Draws a vertical work line to the left or right of the wall. Enter amount of offset from face of wall.

SSDCP Manual

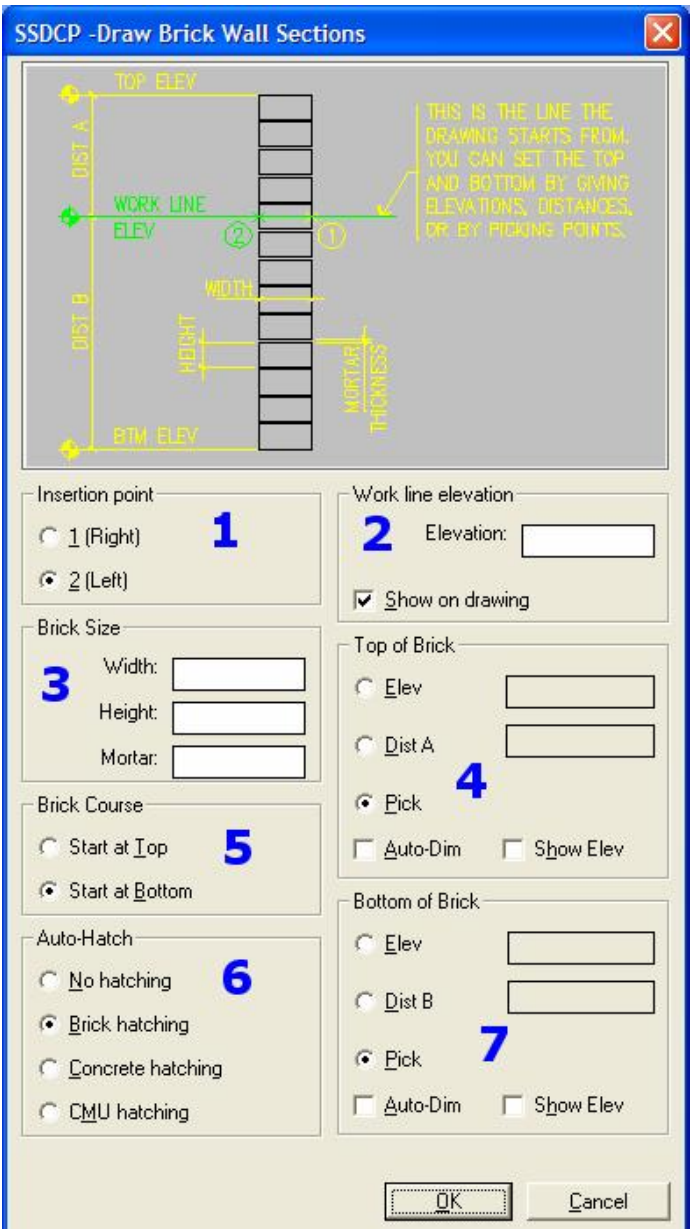
DRAW BRICK WALL SECTIONS

Select SSDCP **à** Other Main Programs **à** For Erection **à** Draw BRICK WALL sections



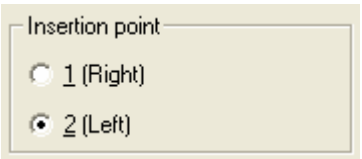
For an explanation of each area, see the corresponding number in the graphic with notes below.

SSDCP Manual



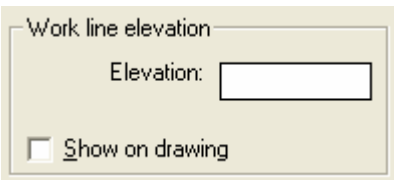
SSDCP Manual

1. Insertion Point



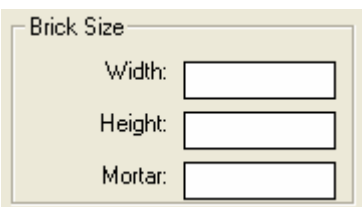
Select either right or left as the insertion point (face of brick)

2. Work Line Elevation



Enter the elevation of the work line. Check “Show on Drawing” to have elevation text shown on work line.

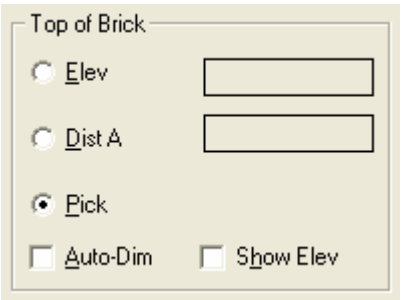
3. Brick Size



Enter brick width, height and mortar dimension thickness.

SSDCP Manual

4. Top of Brick Elevation



Elevation at top of brick – will draw to scale elevation entered minus work elevation entered

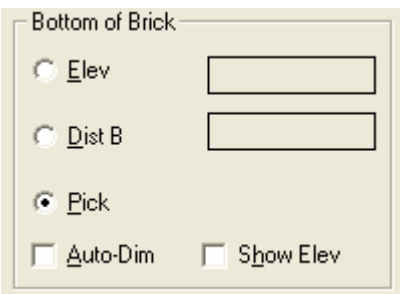
Dist A – will draw to scale the distance entered

Pick – allows user to pick point to draw to

Auto-Dim – will dimension distance from work line to top of brick

Show Elev – will show elevation text at top of brick

5. Bottom of Brick Elevation



Elevation at bottom of brick – will draw to scale elevation entered minus work elevation entered

Dist B – will draw to scale the distance entered

Pick – allows user to pick point to draw to

Auto-Dim – will dimension distance from work line to bottom of brick

Show Elev – will show elevation text at bottom of brick

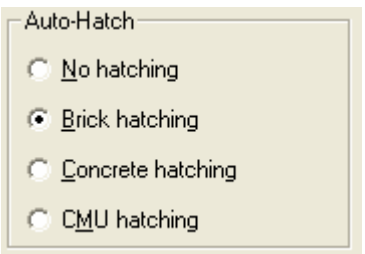
SSDCP Manual

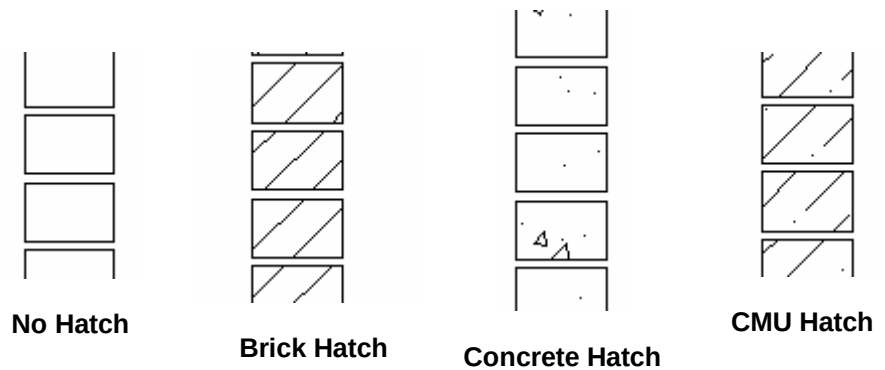
6. Brick Course



Select “top” or “bottom” to set where brick course is drawn from

7. Brick Hatch





No Hatch **Brick Hatch** **Concrete Hatch** **CMU Hatch**

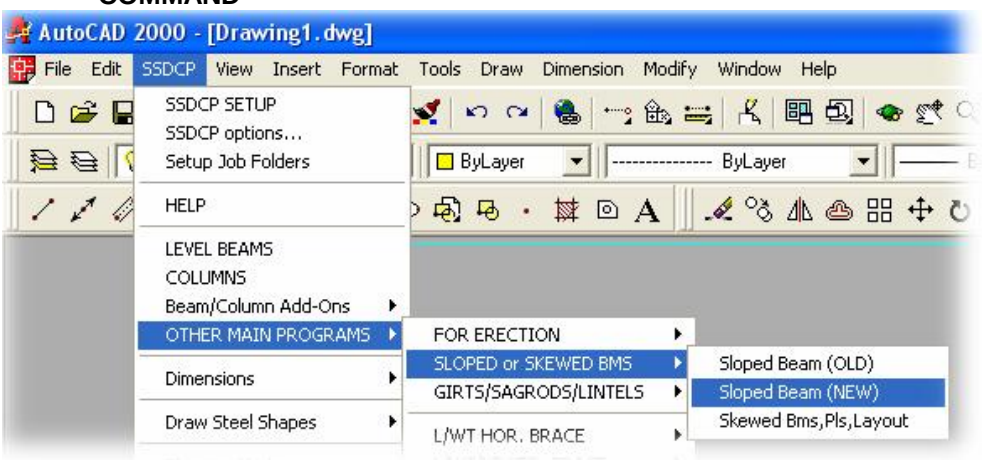
SSDCP Manual

Sloping Beam

DESCRIPTION

This program will draw sloping beams in "position" to scale. There will be two work points at each end of beam. The main wp will be at the center of the support point, and the 2nd wp will be the face of clips, end plate, or end of beam when you have open holes. Elevations printed on drawing will be to the 2nd work point. All overall dimensions will be from 2nd wp to 2nd wp. Blocks will be dimensioned. All stubs to holes will be dimensioned from point as selected by line "0" in global questions.

COMMAND



THE FOLLOWING RULES WILL APPLY FOR SLOPED BEAMS:

1. The ends of all beams will be cut on a bevel. If you want the beam to be cut square, you will have to modify the picture and adjust the "cut length" after the program has been completed.

2. All open holes, clip angles, and end plates at the ends of the beams will be drawn vertical. If condition exists "rotate" clip angles or end plates to suit after program is complete.

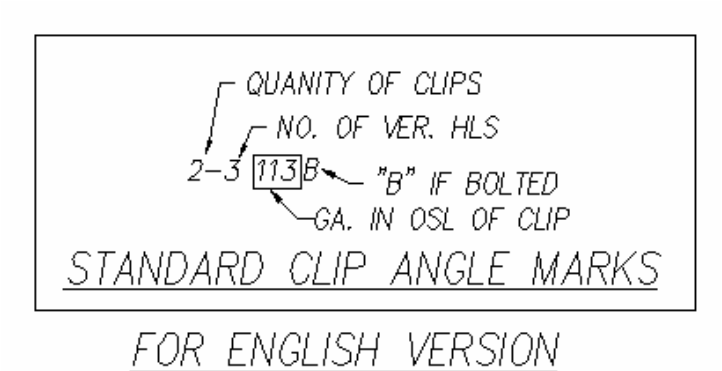
3. All interior beam connection holes or shear bars will be drawn perpendicular to top flange.

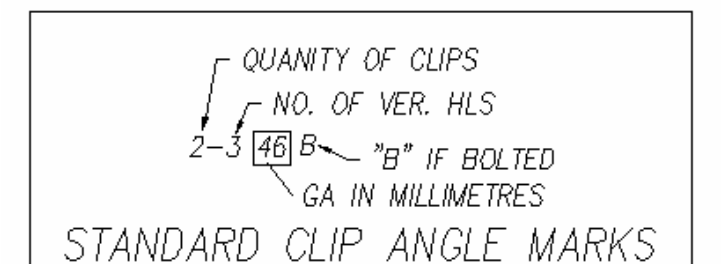
If answer is "C", all stubs will be from the face of clip angles, end plates or end of beam when you have open holes at the top flange and from the 2nd work point.
If answer is "B", and you do not want to cut beam square, the stubs will be from the longest point at left end of the beam itself.
If answer is "B", and you are going to cut beam square, then the stubs will be from the end of the beam itself, at the top flange.

DRAWING SCALE: 1"=1' or MM equivalent

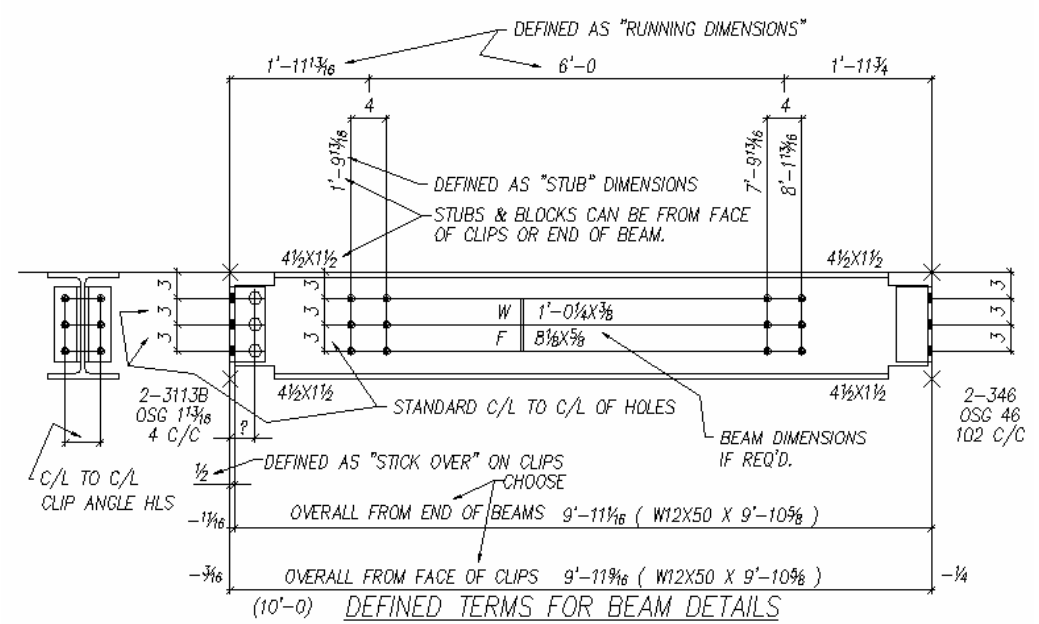
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. So be careful on your inputs…. watch the command area on the monitor for questions and dimension inputs. There will be slides shown to assist you on inputs. Just do what the program asks you to do.

Clip Angles

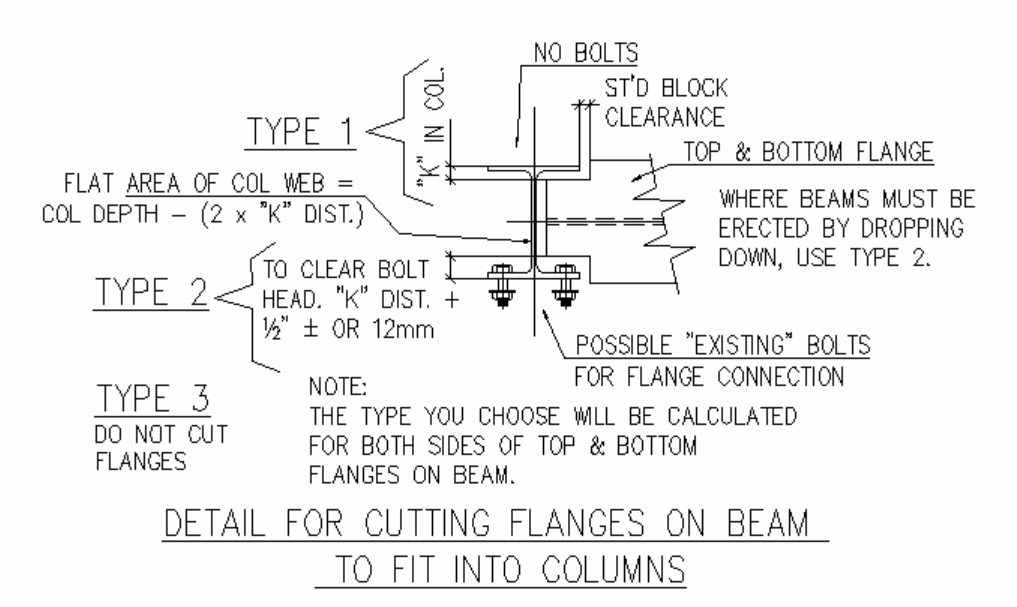




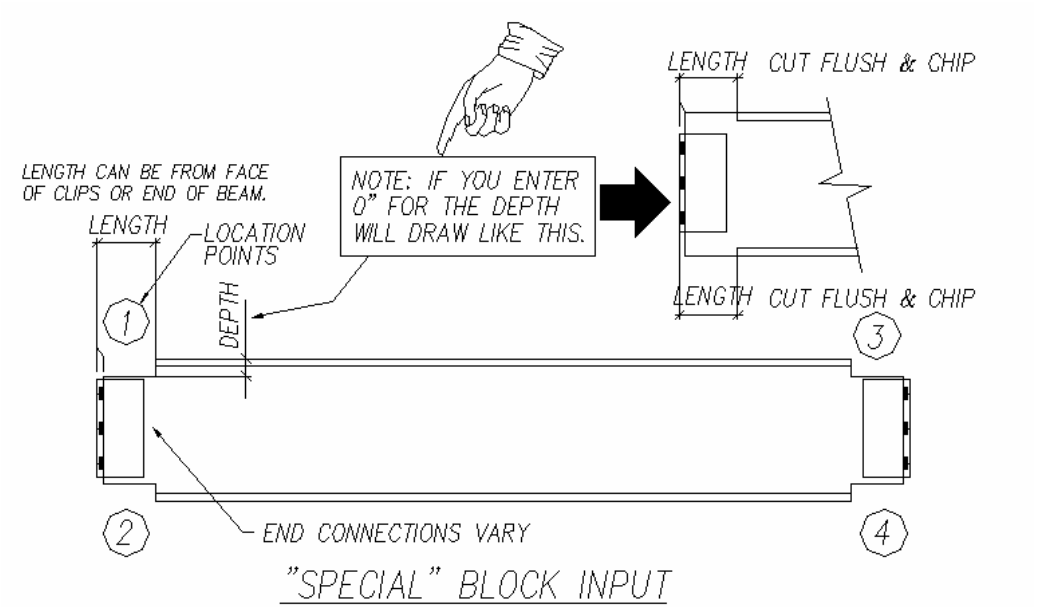
Defined Terms for Beam Details



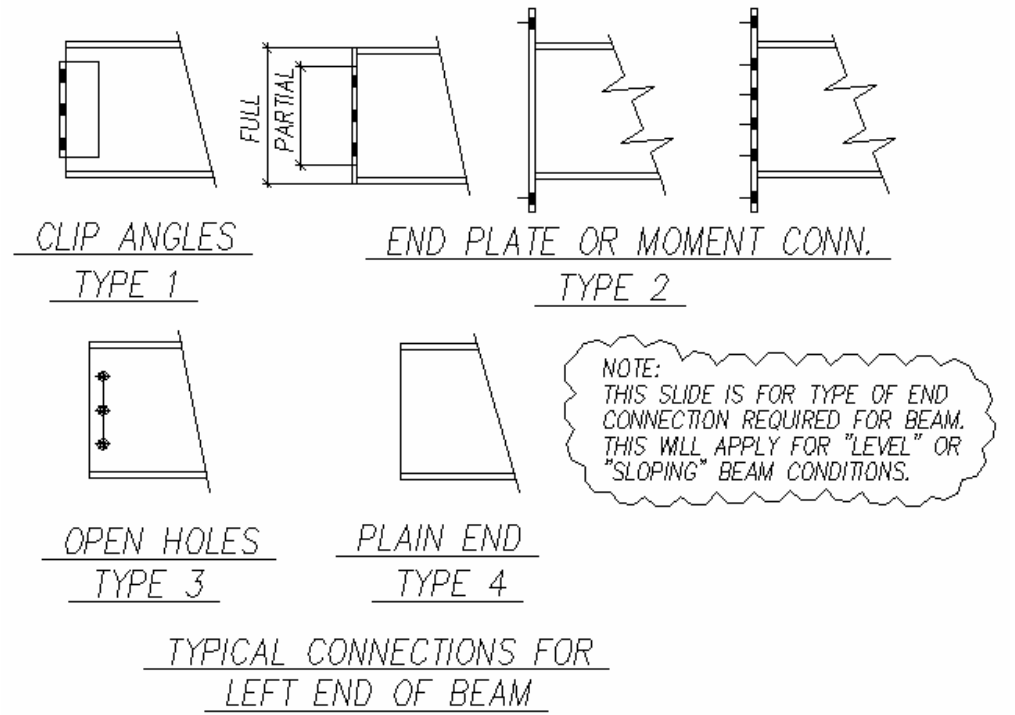
Beam Cuts Framing to Column Webs


NO BOLTS
ST'D BLOCK CLEARANCE
TOP & BOTTOM FLANGE
WHERE BEAMS MUST BE ERECTED BY DROPPING DOWN, USE TYPE 2.
TYPE 1
"K" IN COL.
FLAT AREA OF COL WEB = COL DEPTH – (2 x "K" DIST.)
TYPE 2
TO CLEAR BOLT HEAD. "K" DIST. + ½" ± OR 12mm
POSSIBLE "EXISTING" BOLTS FOR FLANGE CONNECTION
TYPE 3
DO NOT CUT FLANGES
NOTE:
THE TYPE YOU CHOOSE WILL BE CALCULATED FOR BOTH SIDES OF TOP & BOTTOM FLANGES ON BEAM.
DETAIL FOR CUTTING FLANGES ON BEAM TO FIT INTO COLUMNS

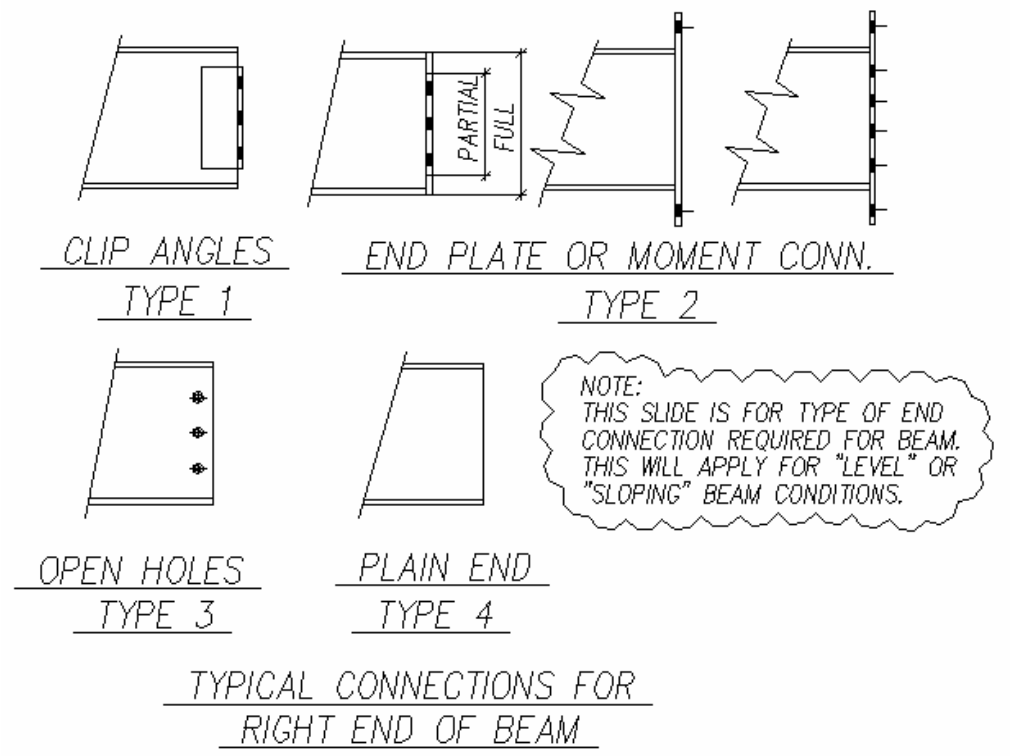
Special Block Input



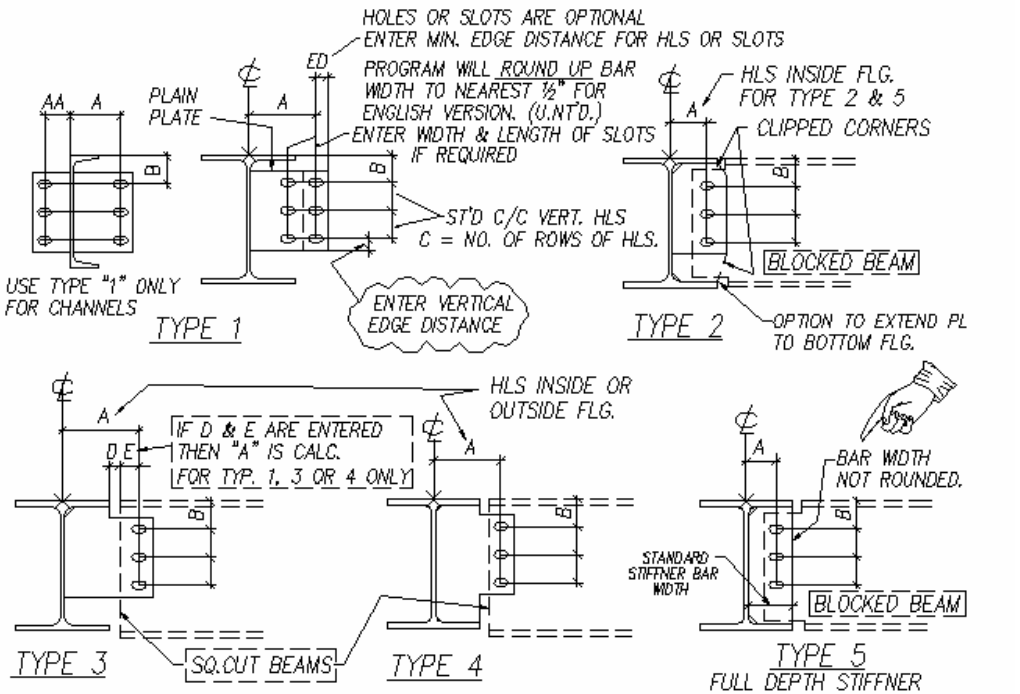
Left End Beam Connections



Right End Beam Connections



Shear Bars


HOLES OR SLOTS ARE OPTIONAL
ENTER MIN. EDGE DISTANCE FOR HLS OR SLOTS
PROGRAM WILL ROUND UP BAR WIDTH TO NEAREST ½" FOR ENGLISH VERSION. (U.NT'D.)
ENTER WIDTH & LENGTH OF SLOTS IF REQUIRED
PLAIN PLATE
AA
A
ED
B
ST'D C/C VERT. HLS
C = NO. OF ROWS OF HLS.
USE TYPE "1" ONLY FOR CHANNELS
ENTER VERTICAL EDGE DISTANCE
TYPE 1
HLS INSIDE FLG. FOR TYPE 2 & 5
CLIPPED CORNERS
BLOCKED BEAM
OPTION TO EXTEND PL TO BOTTOM FLG.
TYPE 2
HLS INSIDE OR OUTSIDE FLG.
IF D & E ARE ENTERED THEN "A" IS CALC. FOR TYP. 1, 3 OR 4 ONLY
D E
SQ.CUT BEAMS
TYPE 3
TYPE 4
BAR WIDTH NOT ROUNDED.
STANDARD STIFFNER BAR WIDTH
BLOCKED BEAM
TYPE 5
FULL DEPTH STIFFNER

SHEAR BARS FOR WF or CHANNEL BEAMS

NOTES:

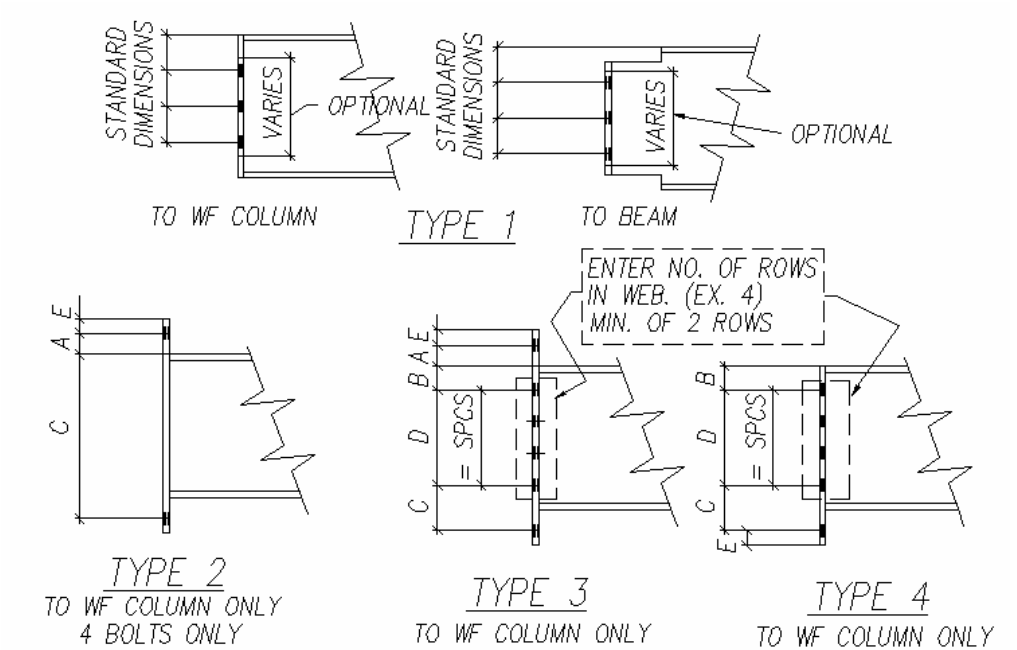
TYPE 1 – Holes can be inside or outside of flanges, plate not fitted.

TYPE 2 – Holes are normally inside flanges, but edge of plate must extend a little bit beyond flanges. Clipped corners cheaper to fabricator than types 3 or 4.

TYPES 3 or 4 – Holes can be inside or outside of flanges, plate must extend beyond flanges. Notched plate more expensive to fabricator than type 2.

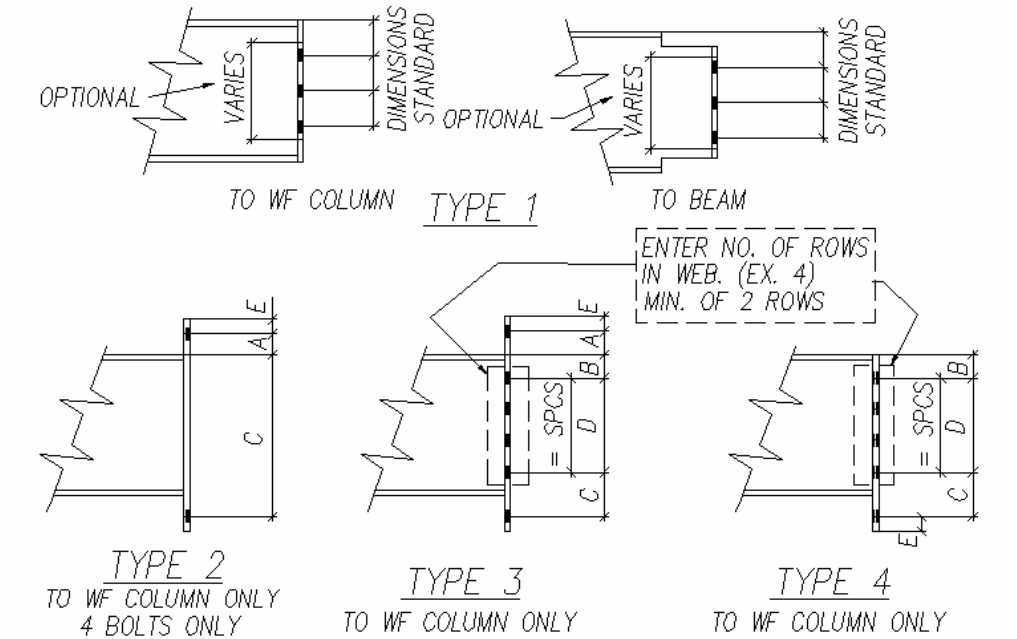
TYPE 5 – Holes must be inside flange, uses standard stiffener bar width only.

End Plates – Left End

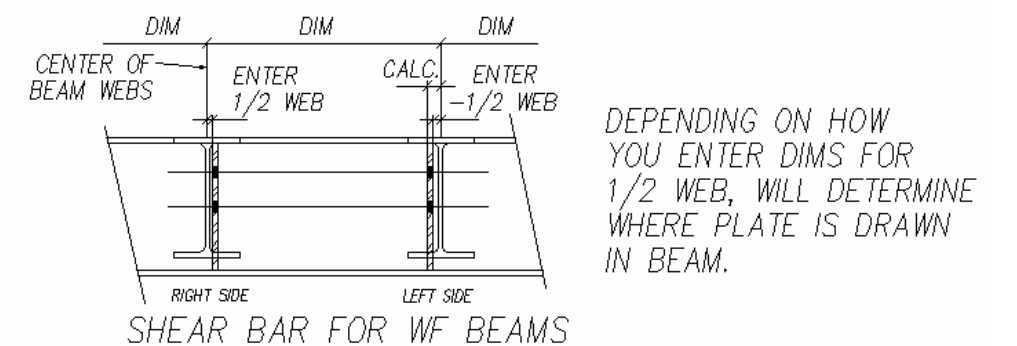


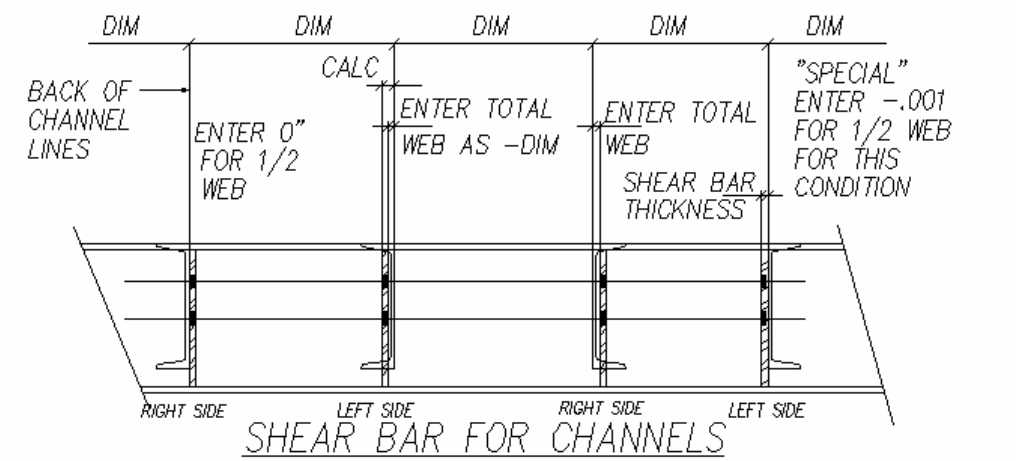
SSDCP Manual

End Plates - Right End

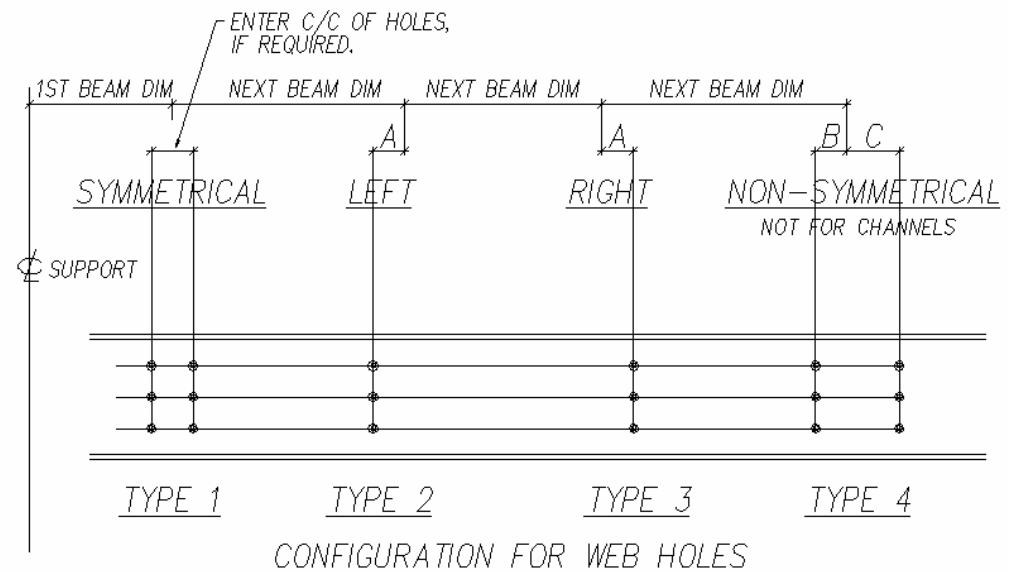


Inputting Shear Bars

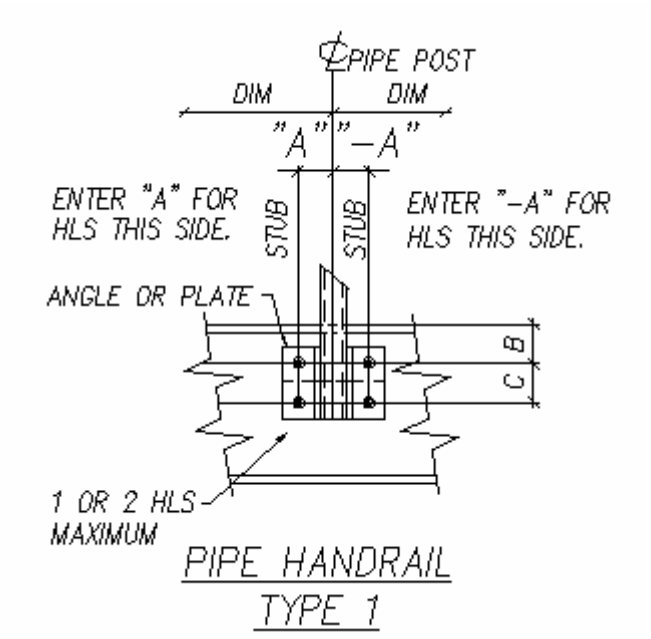




Configuration for Web Holes

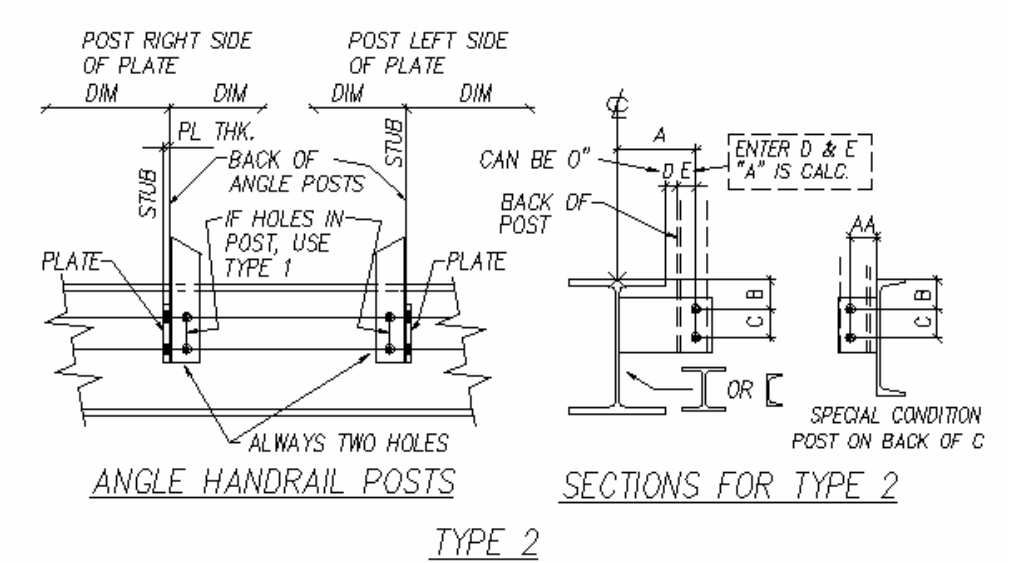


Pipe Handrail Connection to Beam



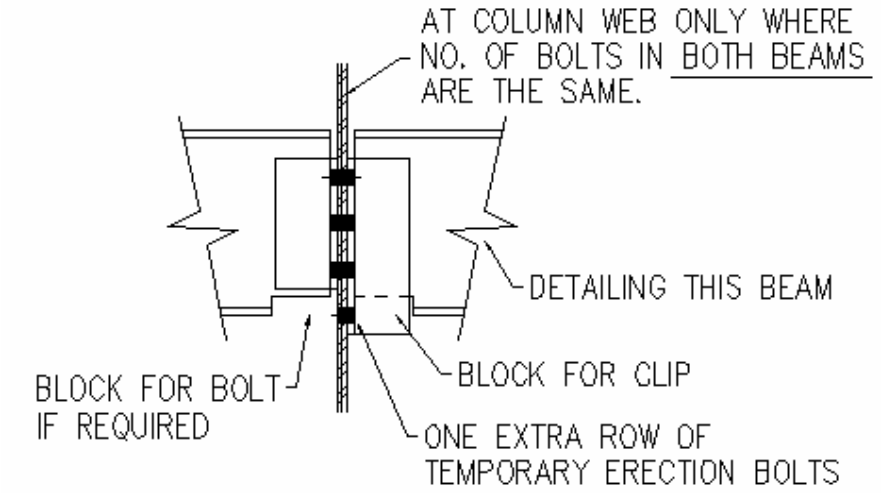
SSDCP Manual

Angle Handrail Connection to Beam

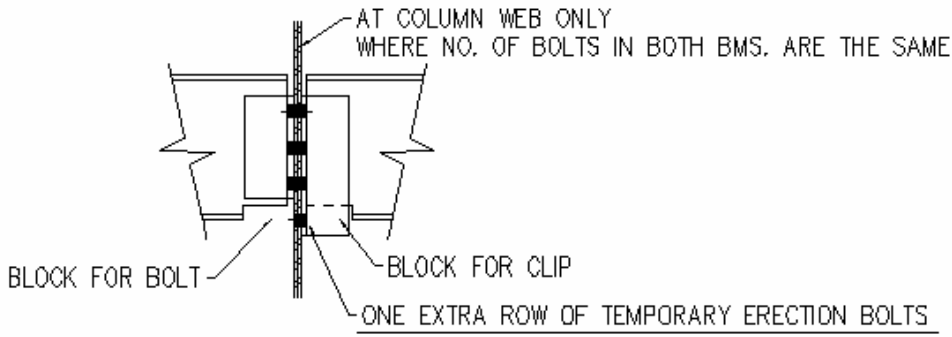


SSDCP Manual

Safety Connections



EXAMPLE FOR "SAFETY" CONNECTIONS

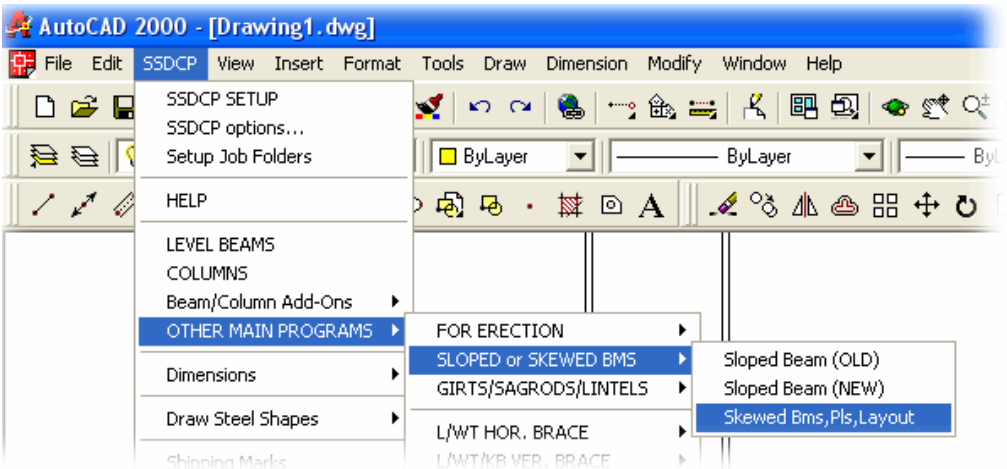

AT COLUMN WEB ONLY
WHERE NO. OF BOLTS IN BOTH BMS. ARE THE SAME.
BLOCK FOR BOLT
BLOCK FOR CLIP
ONE EXTRA ROW OF TEMPORARY ERECTION BOLTS

AT "SAFETY" CONNECTION, IF REQ'D

SSDCP Manual

Skewed Beams

COMMAND



DESCRIPTION:

This program will draw a skewed connection for a horizontal beam in any direction and on any bevel. This program will draw a top view of the flange and the elevation of the beam or channel and will draw one of three different type connections: Bent plates, End plates, or Open holes. This program will give all dimensions for block sizes and all other dimensions to bend lines, etc. required for the shop. However, it only draws the ends of the beams one at a time. These can be easily assembled together to complete the beam detail to suit, using standard AutoCAD commands. Modify the picture and add overall dimensions as required to suit.

You have to consider nut clearance before entering the "D2" dim. for TYPE 1 and 2, and "D1" for TYPE 3 (See manual). If you do not the "D2" dim. for TYPE 1 and 2, OR "D1" dim. for TYPE 3, enter a small dimension, such as one inch. The program will calculate the minimum "D2" dim. or "D1" dim. This will ensure that the nut can be put on the bolt.

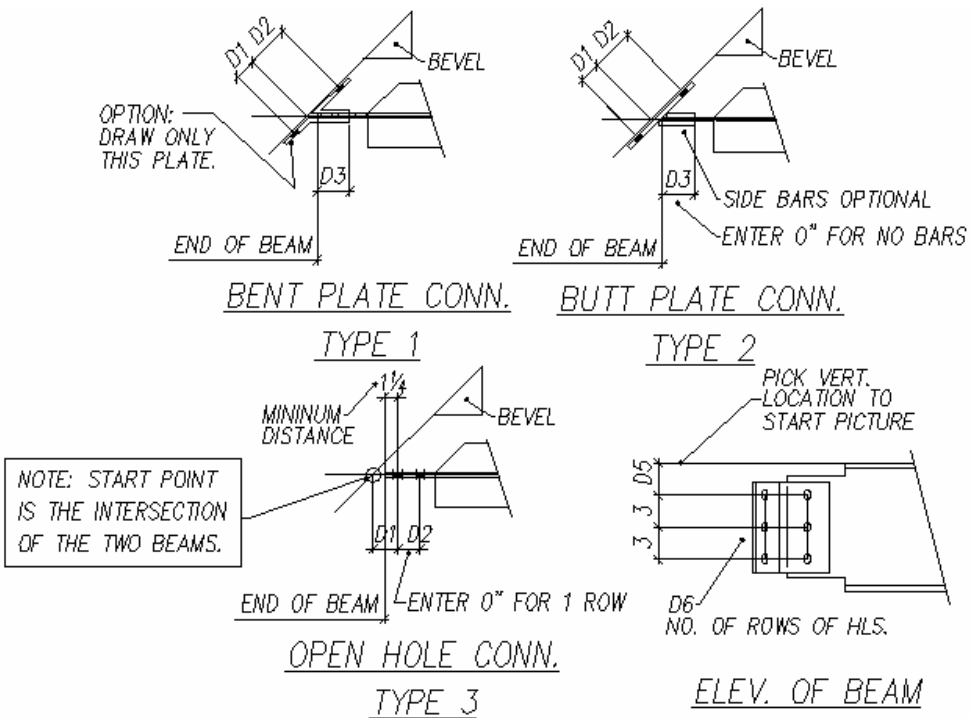
Because the program draws to scale, some dimension lines may be very close together. When plotted, these lines may become one line depending on pen size. This makes it

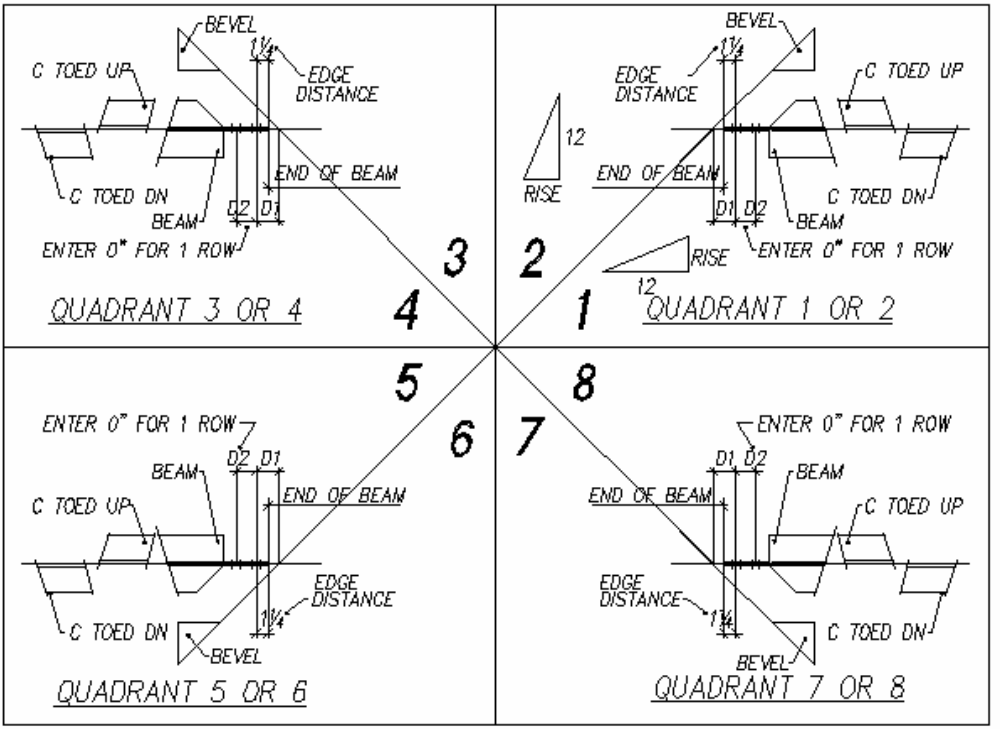
SSDCP Manual

DRAWING SCALE: 1"=1' or MM equivalent

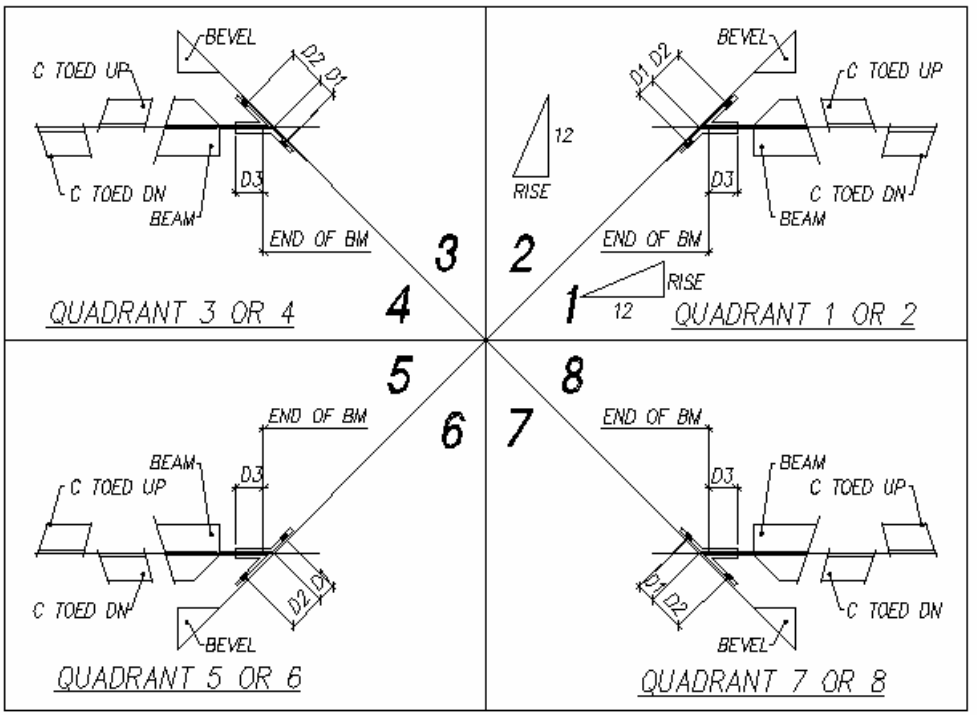
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. So be careful on your inputs…. watch the command area on the monitor for questions and dimension inputs. There will be slides shown to assist you on inputs. Just do what the program asks you to do.

Skewed Beam End Connections



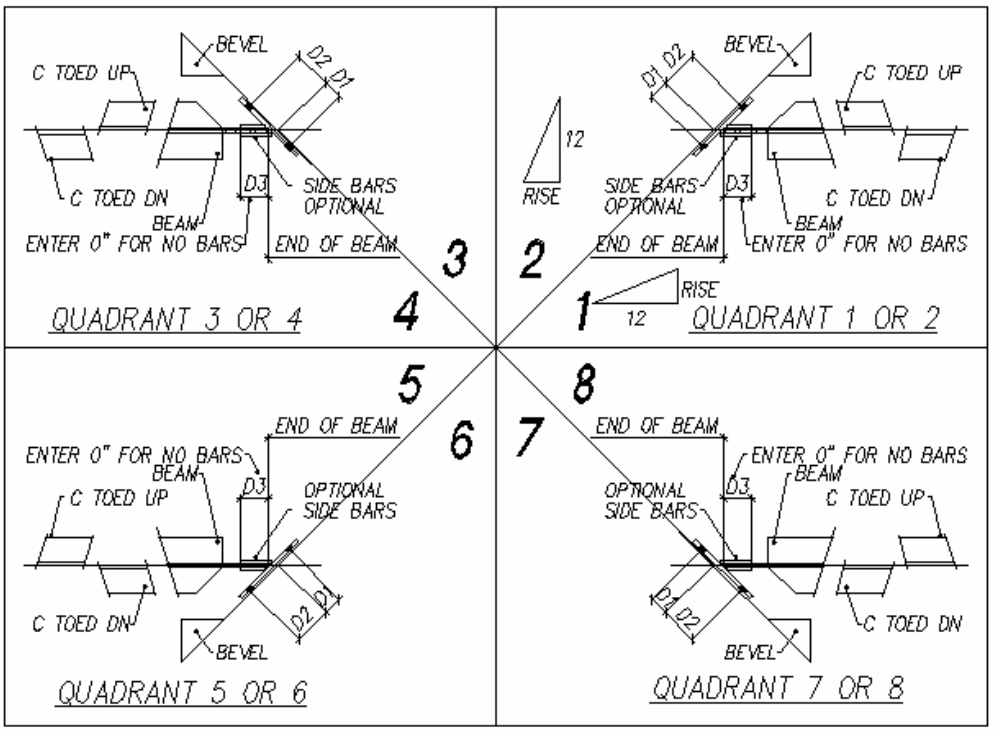


OPEN HOLE CONNECTION



BENT PLATE CONNECTION

SSDCP Manual

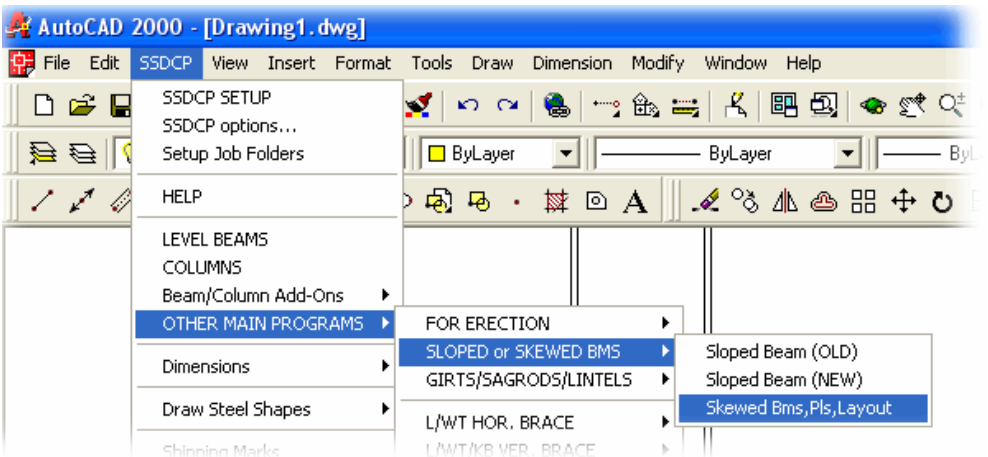


END PLATE CONNECTION

SSDCP Manual

Adding Skewed Plates to Beams

COMMAND



DESCRIPTION

This program is for adding a skewed plate in any direction, and on any bevel to a beam detail. This program will draw a view of the plate above the beam and project the plate down into the beam web. However, you can use this program to draw other type skewed plates, but you might have to mirror, rotate, or move the details to suit other conditions after the program is complete.

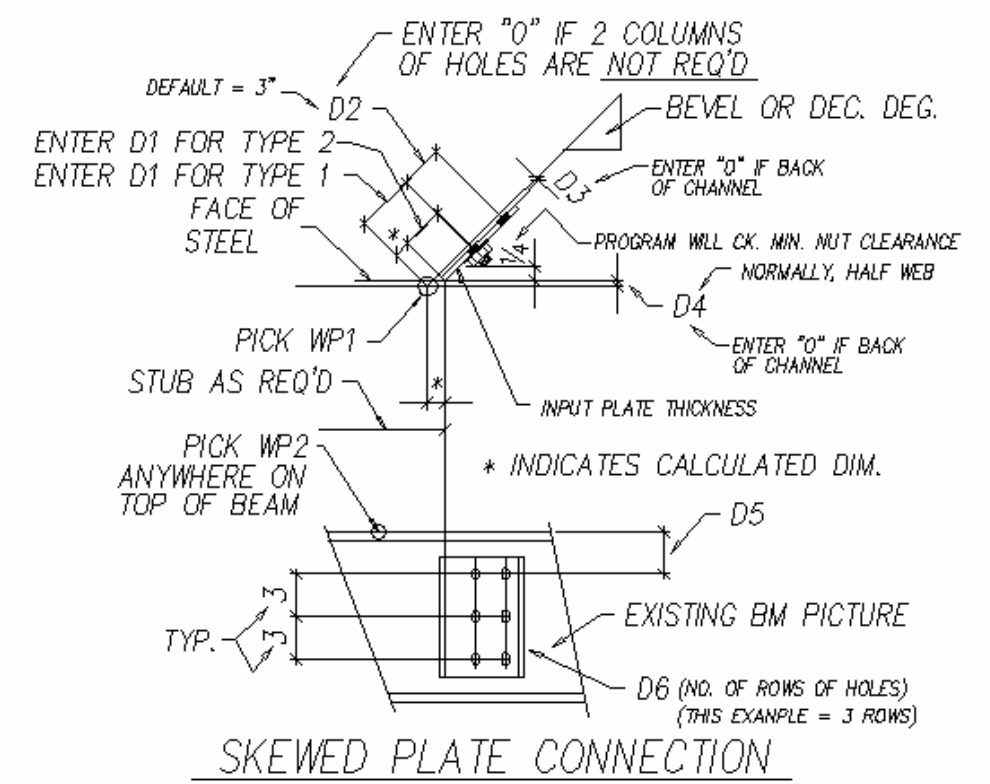
There are two (2) things you have to consider before entering the "D1" dimension.

1. Beam clearance
2. Nut clearance

If you don't know the "D1" dimension, enter a small dimension. The program will calculate the minimum "D1" dimension. this will insure the nut can be put on the bolt. You will have to check to make sure the beam can be bolted to the plate. This could change the "D1" dimension from that calculated.

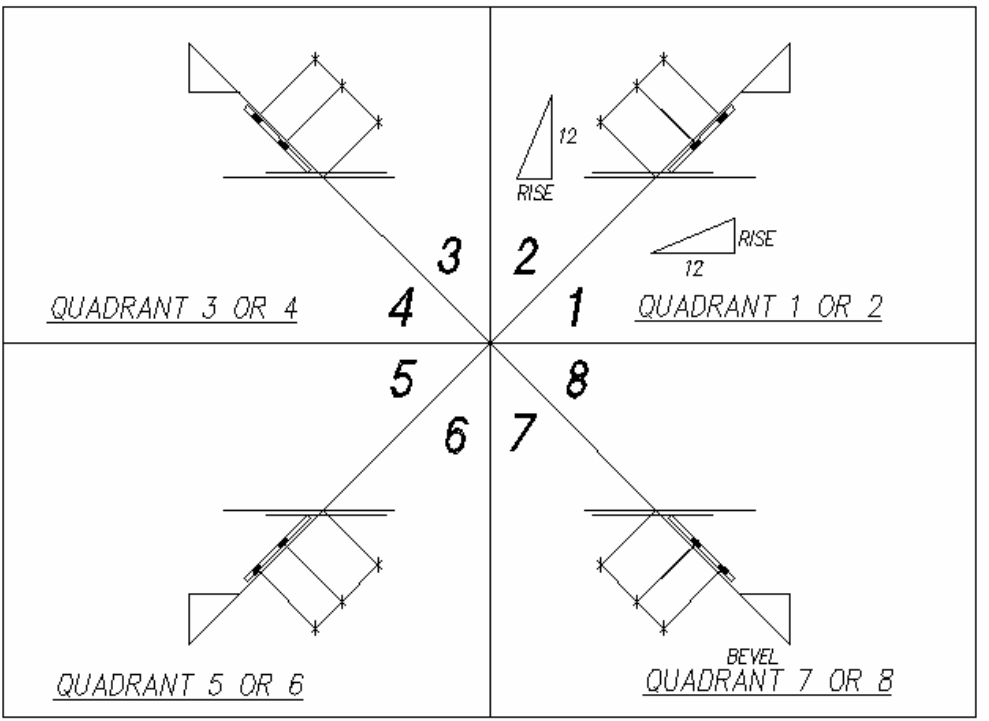
DRAWING SCALE: 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C"



SKEWED PLATE CONNECTION

SSDCP Manual



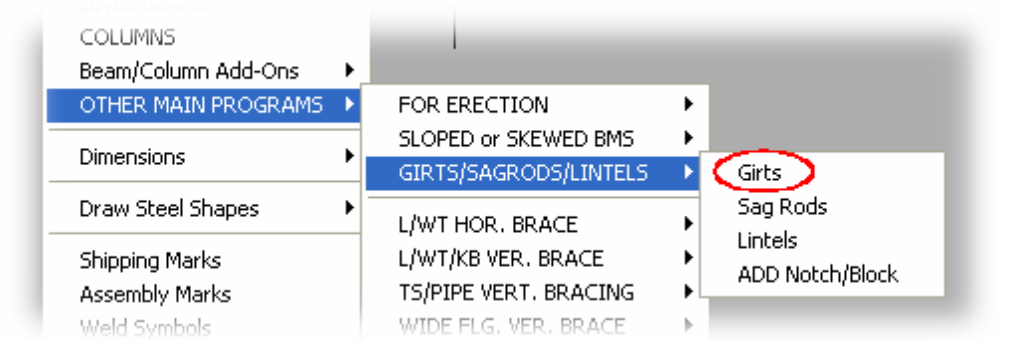
SSDCP Manual

GIRTS

DESCRIPTION

This program draws channel girts for siding on buildings. The program will handle connections to corner or interior columns, and to doorframes. The program will locate and draw sag rod holes and open hole connections for door frames. For this program to work correctly, you must detail girts looking at girts from outside of the building.

COMMAND



CONNECTION INFORMATION

NOTE: The first time through the program you will be required to give dimensions to all questions asked. After that, the program will ask if this end you are drawing is exactly like the last end that you drew. This not only applies to the type of end, but also to the left and right ends. Because hole spacing for end connections will probably be the same for all girts on a job, this is an easy way of locating the holes in the ends of the girts. You can also add special block input for copes.

You will be shown slides for the condition you have:

Corner Columns
Interior Columns
Door Jambs

EXAMPLE: You are detailing a girt that frames to interior columns at both ends. Once you have given the dimensions for the left end, the program will ask if the right end is the

SSDCP Manual

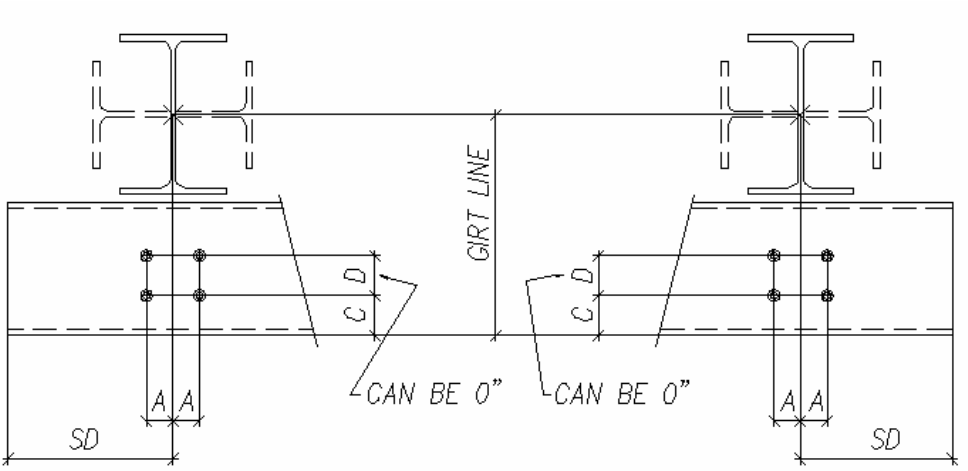
IF YOU WANT TO DRAW THE DOOR FRAME DETAILS:
The program will insert the door frame block. Pick a large clear area on the sheet. See the manual for location of insertion point. There are two different types of door frames in the block. Pick insertion point.
Will insert the DRFRM.DWG on the sheet. You may then move this block where you want to, explode the block and change it to suit.

DRAWING SCALE: 1"=1' or MM equivalent

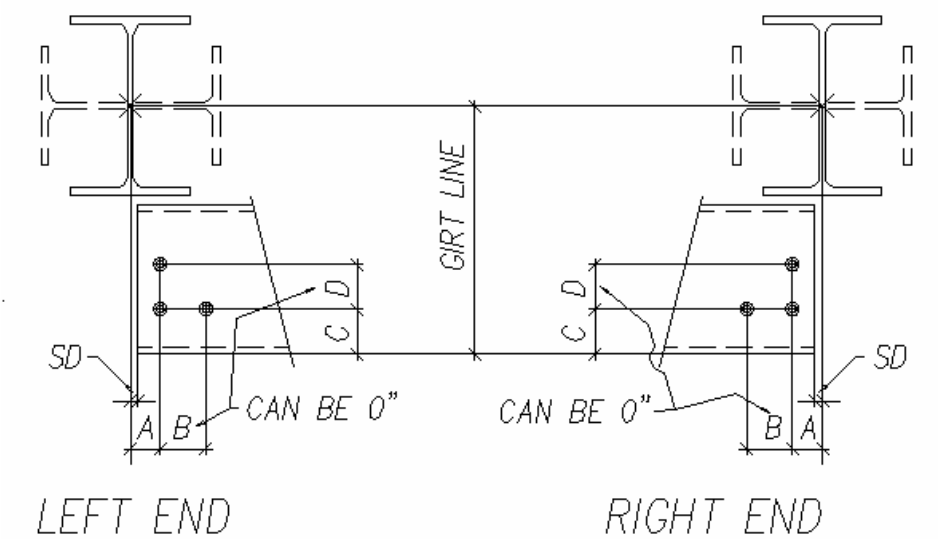
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. So be careful on your inputs…. watch the command area on the monitor for questions and dimension inputs. There will be slides shown to assist you on inputs. Just do what the program asks you to do.

Girt Connections at Columns

Screenshots below show questions that will be asked when you are detailing the girts. SSDCP remembers the last input condition to speed the detail process along, so use your own detailing experience to decide the order you detail the girts in. (i.e. – detail all corners conditions together, then interior conditions together)



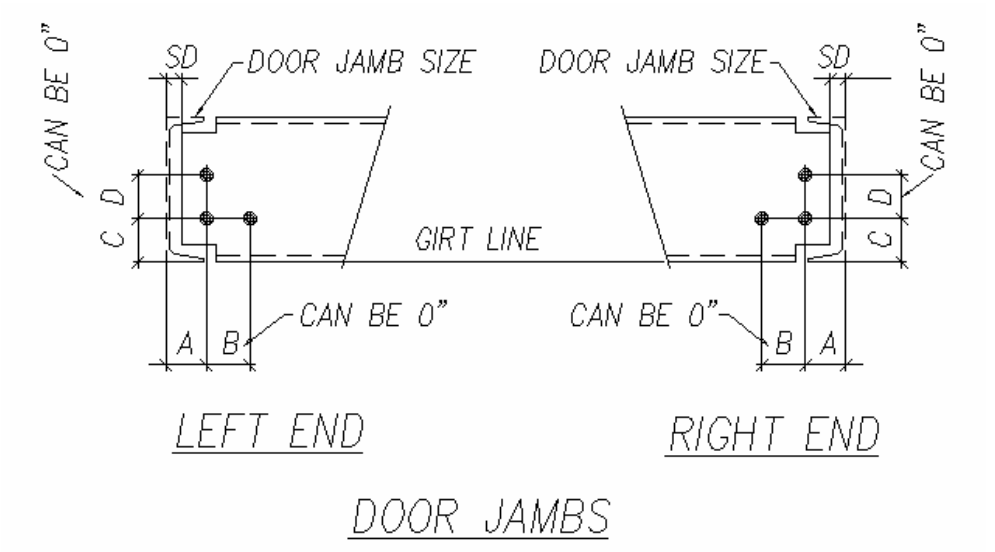
CORNER COLUMNS



SSDCP Manual

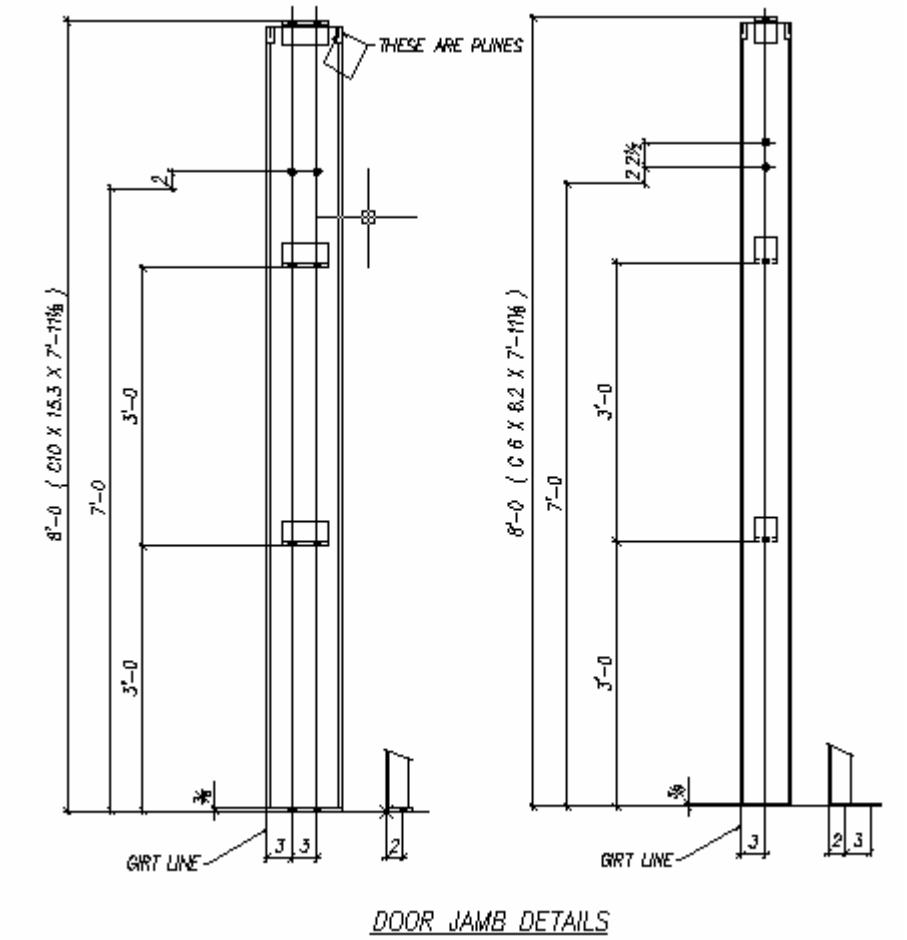
Door Jambs

Door jamb details can be done by answering questions from the slides below. After detailing these, you can place a generic drawing (after being prompted by the system) of a door frame and fill in the blanks.

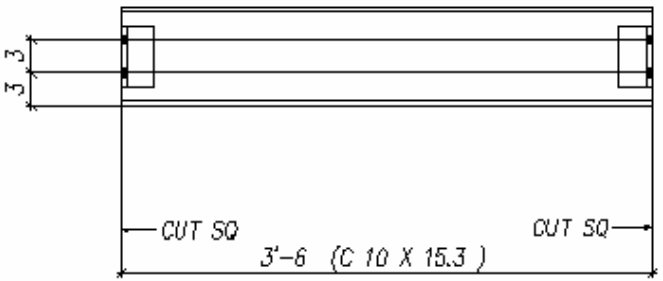


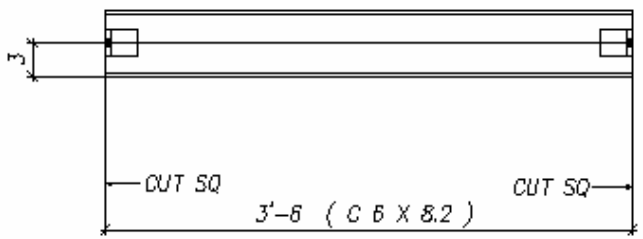
SSDCP Manual

Generic Door Details



DOOR JAMB DETAILS





DOOR HEAD DETAILS

SSDCP Manual

Sag Rods

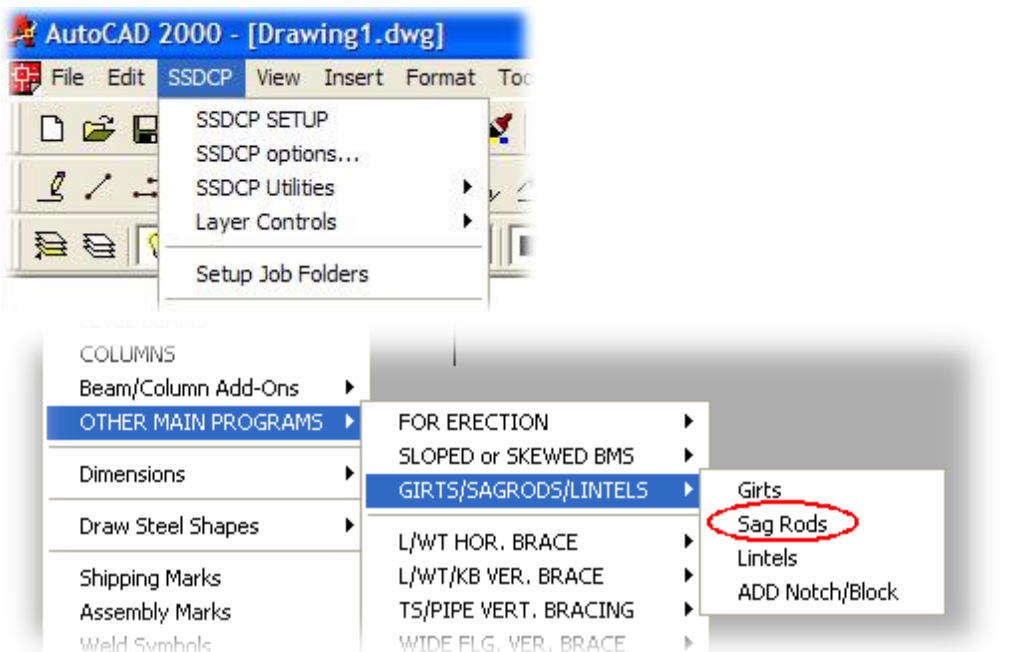
DESCRIPTION

This program will draw either straight or bent SAG RODS. This information is put into a TABLE format UNDER the picture. Before you run this program, make a list of the sag rods including the QUANITY and the VERTICAL DISTANCE (REF. DIMS.) between the GIRTS. The length of the rods will be rounded up or down to the nearest even inch (IF ENGLISH).

The shipping mark system used for these sag rods is:

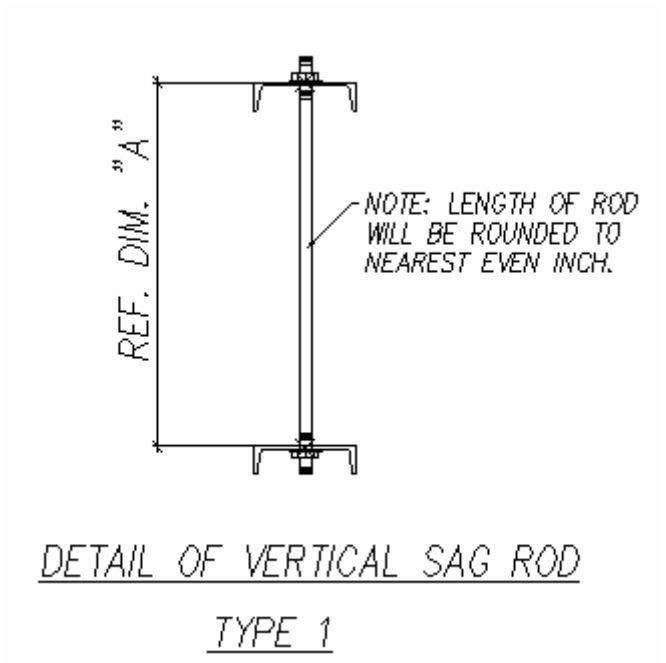
1. For straight rods: "X" + length of rod in inches (mm).
2. For bent rods: "XX" + length of rod in inches (mm).

COMMAND



SSDCP Manual

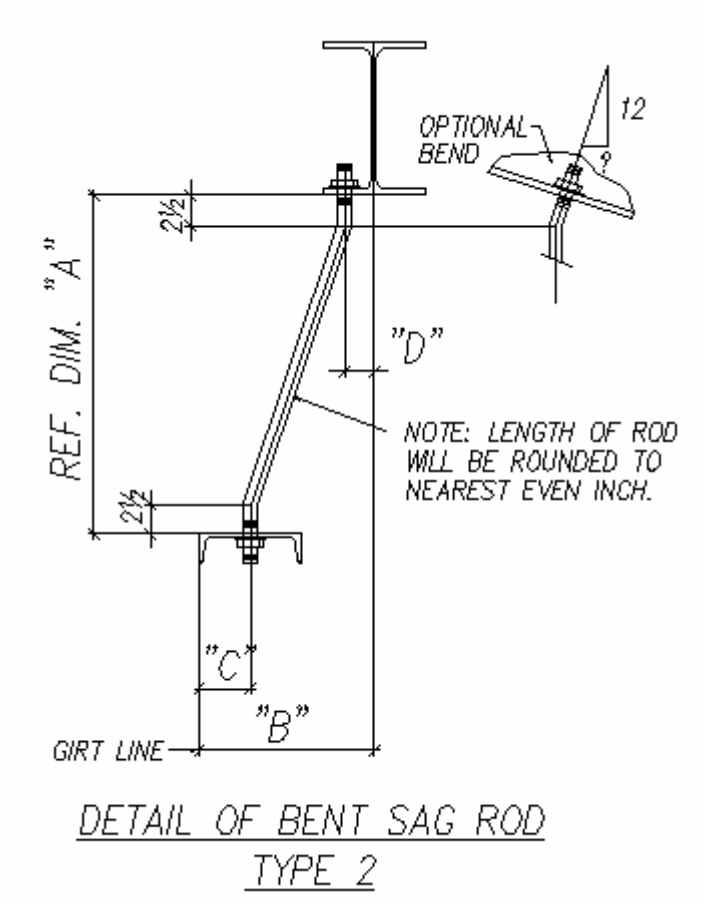
Sag Rod Type 1



Enter diameter
Enter Nuts on each end of rod (1 or 2)
Enter number of washers on each end (0,1 or 2)
Enter reference dimension "A"
Enter Qty.

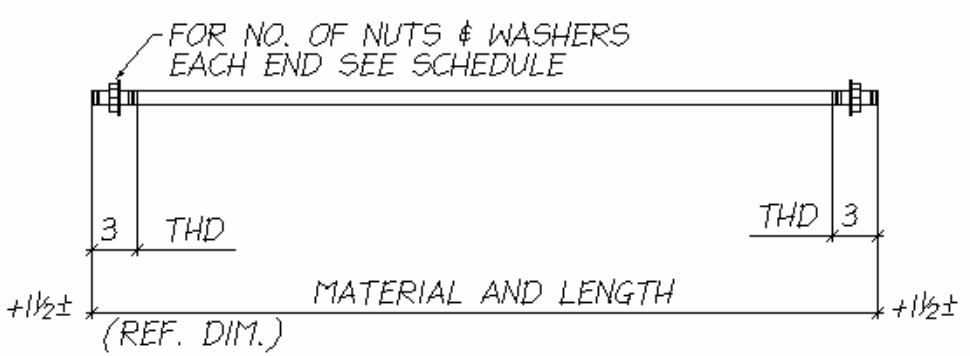
Sag Rod Type 2

SSDCP Manual

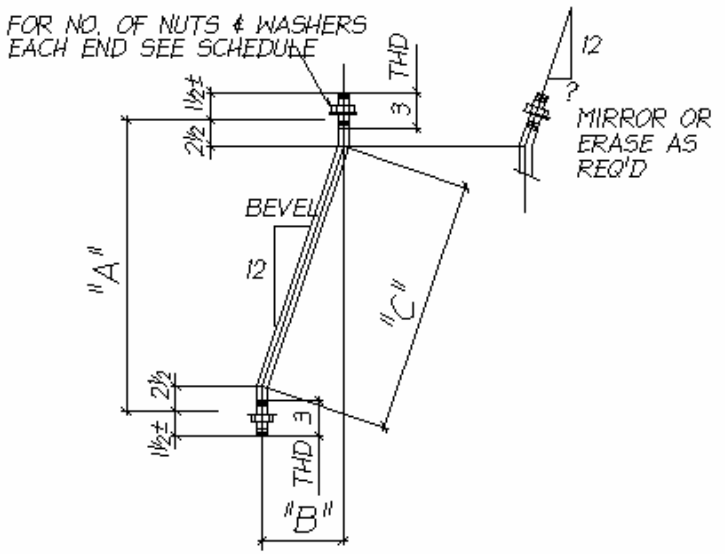


DETAIL OF BENT SAG ROD
TYPE 2

Enter diameter
Enter Nuts on each end of rod (1 or 2)
Enter number of washers on each end (0,1 or 2)
Enter reference dimension "A"
Enter dimension "B"
Enter dimension "C"
Enter dimension "D"
Enter Qty.



SAG ROD SCHEDULE			
==> 2 NUT(S) AND 2 WASHER(S) REQ'D EACH END			
QUANTITY	MARK	MATERIAL & LENGTH	REF. DIM.
2	X51	1Φ ROD x 4'-3	4'-0



BENT SAG ROD SCHEDULE						
==> 2 NUT(S) AND 2 WASHER(S) REQ'D EACH END						
QUANTITY	MARK	MATERIAL & LENGTH	DIM "A"	DIM "B"	DIM "C"	BEVEL
2	XX51	1ϕ ROD X 4'-3	4'-0	4¼	3'-7 3/16	1 3/16
4	XX63	1ϕ ROD X 5'-3	5'-0	4¼	4'-7 3/16	1 5/16

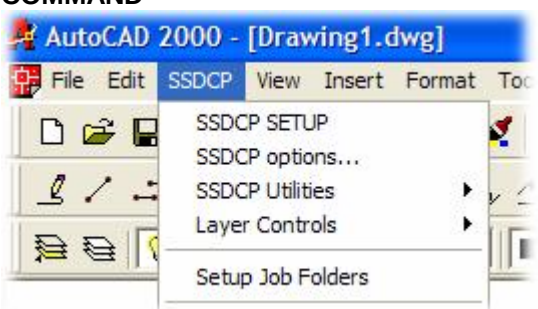
SSDCP Manual

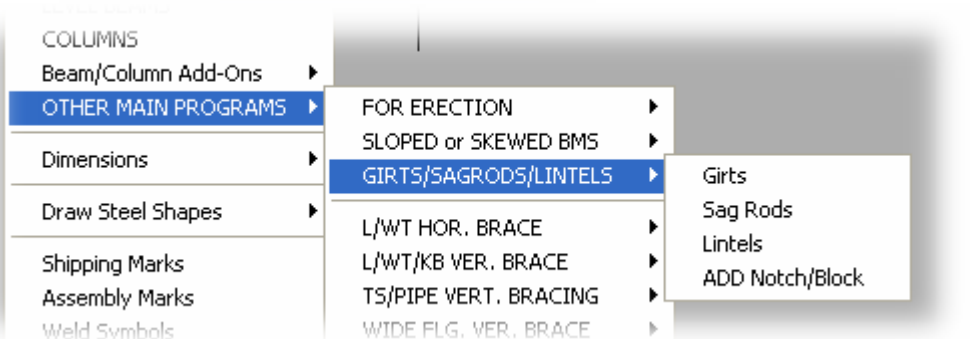
LINTELS

DESCRIPTION

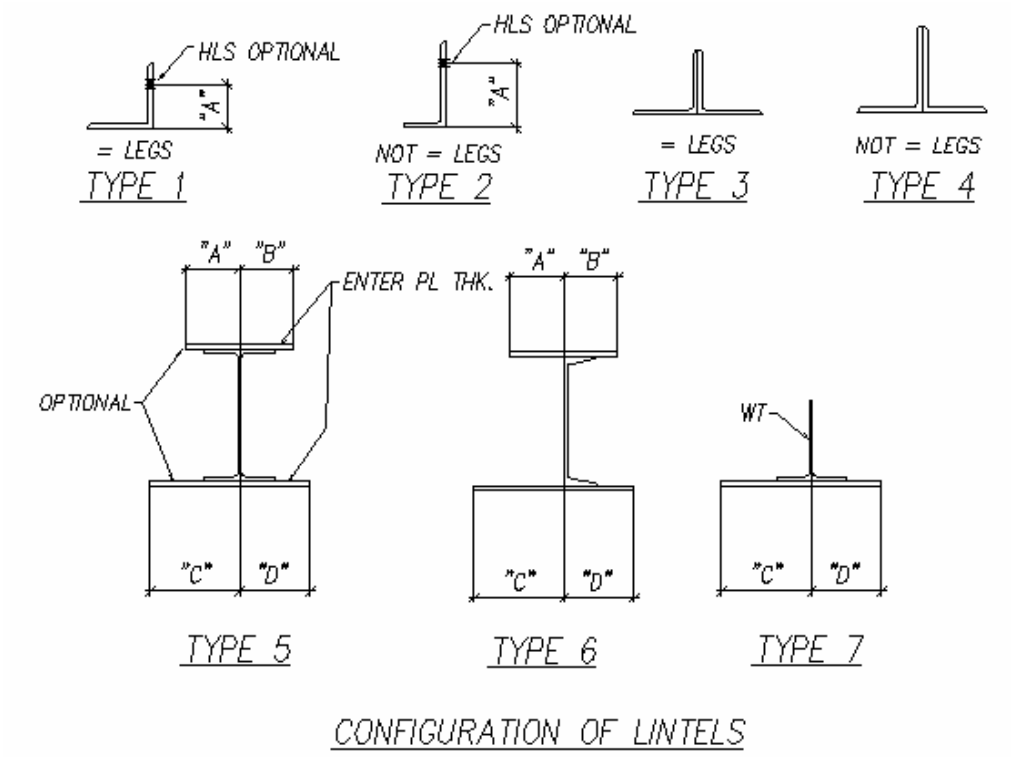
This will draw 7 different types of lintels in various configurations. The lintel types are shown in a slide after your have entered in your masonry opening and bearing for each end. The program makes use of a standard window to allow you to choose the type of material you will be using. Remember when choosing an area on your drawing for these lintels, that an end view is always shown.

COMMAND

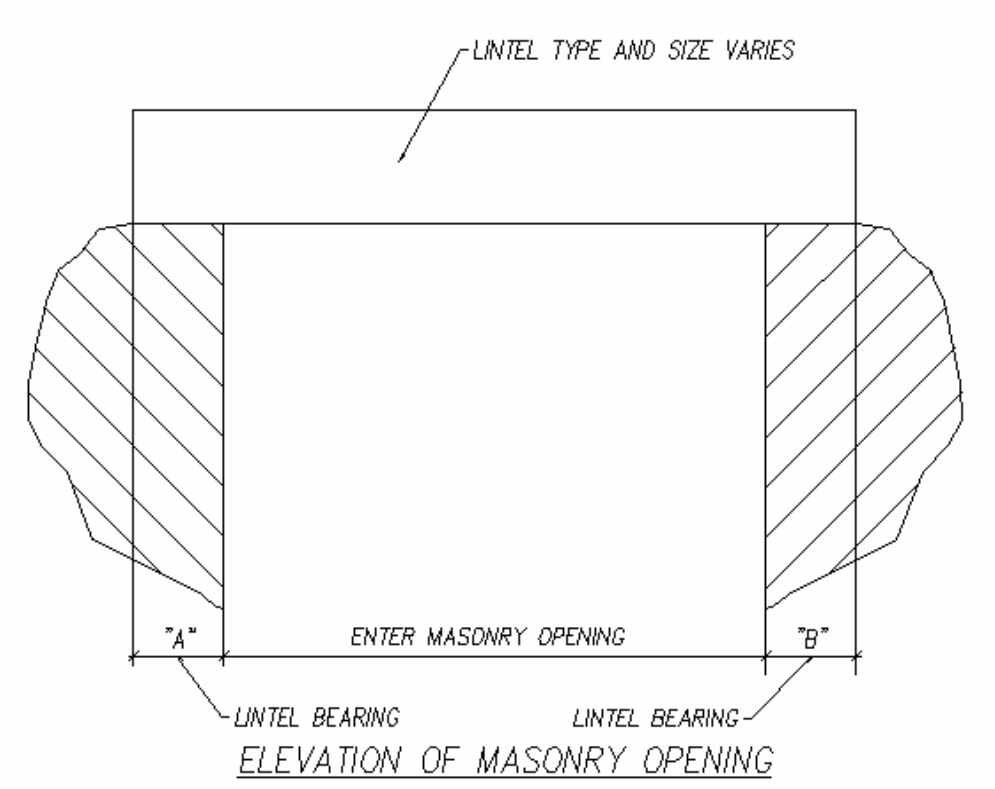




Lintel Types

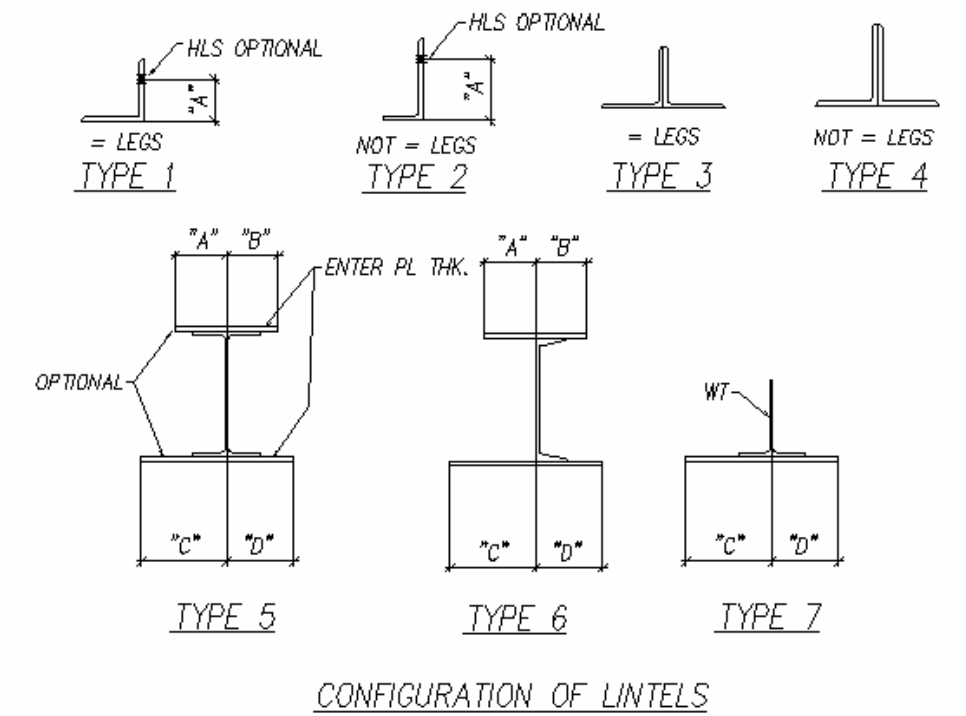


CONFIGURATION OF LINTELS

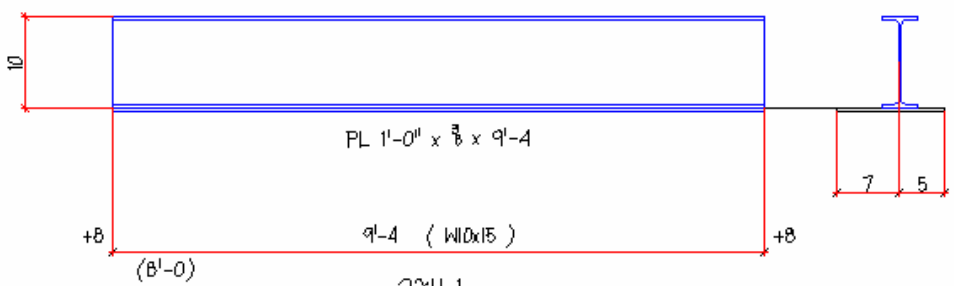


ELEVATION OF MASONRY OPENING

SSDCP Manual



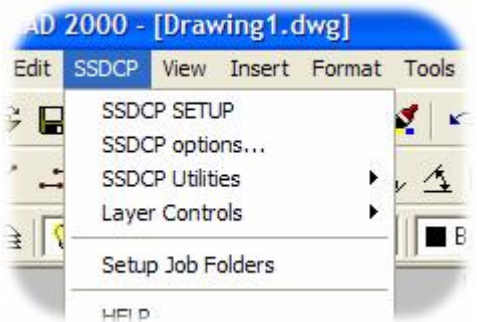
Example of finished lintel

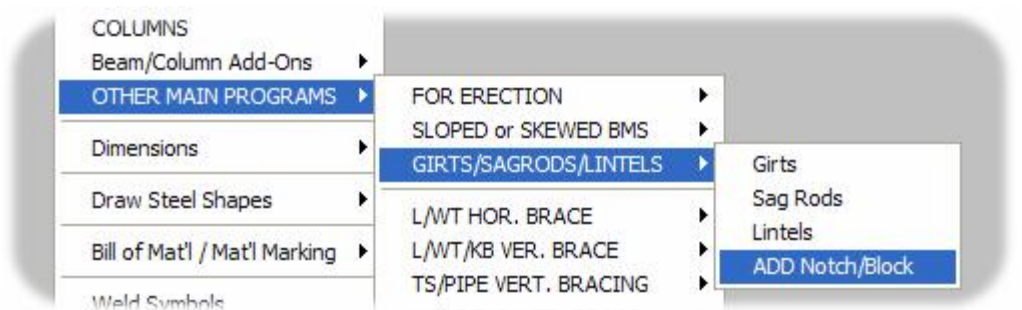


SSDCP Manual

Add Notch or Block

To add a cope (block)





Note that you must already have at least two lines drawn forming a corner before this routine can be run.

1. Pick approximate location of cope
2. Enter cope length (for text label)
3. Enter cope depth (for text label)
4. Inside radius of cope (0= square corner)
5. Pick the intersecting corner
6. Drag line for cope length
7. Drag line for cope depth
8. Pick point to locate the text label for the cope
9. Cope is drawn, trimming all needed lines.

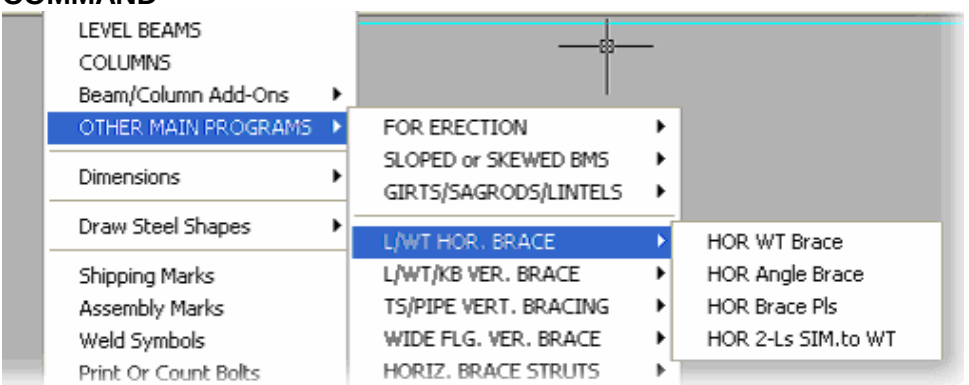
SSDCP Manual

WT Bracing

DESCRIPTION

This program draws WT horizontal bracing. This program writes files in your AutoCAD directory to be used when you start to draw the bracing plates on the beams if they are not bolted to the brace. The program will use the shipping mark and a .HOR extension for the file name. An example of this would be 3D1.HOR. If the brace starts and stops at the cross point, the file will use the first shipping mark for the file name, even if there are two shipping marks.

COMMAND



Use caution if you have two different jobs you are working on and the brace shipping marks could be the same. If the shipping marks are the same, this could cause the files for the second job to overwrite the files for the first job. After you have finished the job and you no longer need the brace files, you can erase all files that have a .HOR extension name from your AutoCAD directory.

WT Brace, connections and bevel are drawn to scale. The length from W.P. TO W.P is not drawn to scale. You will have an option to let computer determine how big to draw picture or you may decide.

OPTIONS

1. Any size WT brace bolted through flange.
2. X bracing cross point can be open hole, bolted plate, or brace. Will stop and start.
3. Will calculate holes in brace if brace bolts to bottom of interior beams.

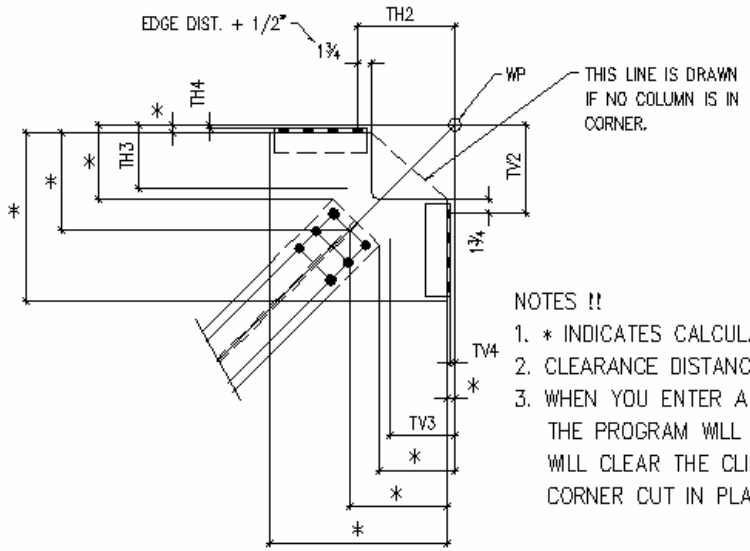
SSDCP Manual

6. Loads can be entered or the program will calculate loads based on the brace size for the number for bolts required in the brace and vertical & horizontal connections in the plates. When the loads are given, the program uses 50% of the effective strength for comparison. SSDCP, Inc. does not assume any responsibility for this design.
7. The program will only draw bracing from lower left to upper right. You may mirror the picture afterwards if you wish.

DRAWING SCALE: 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs.

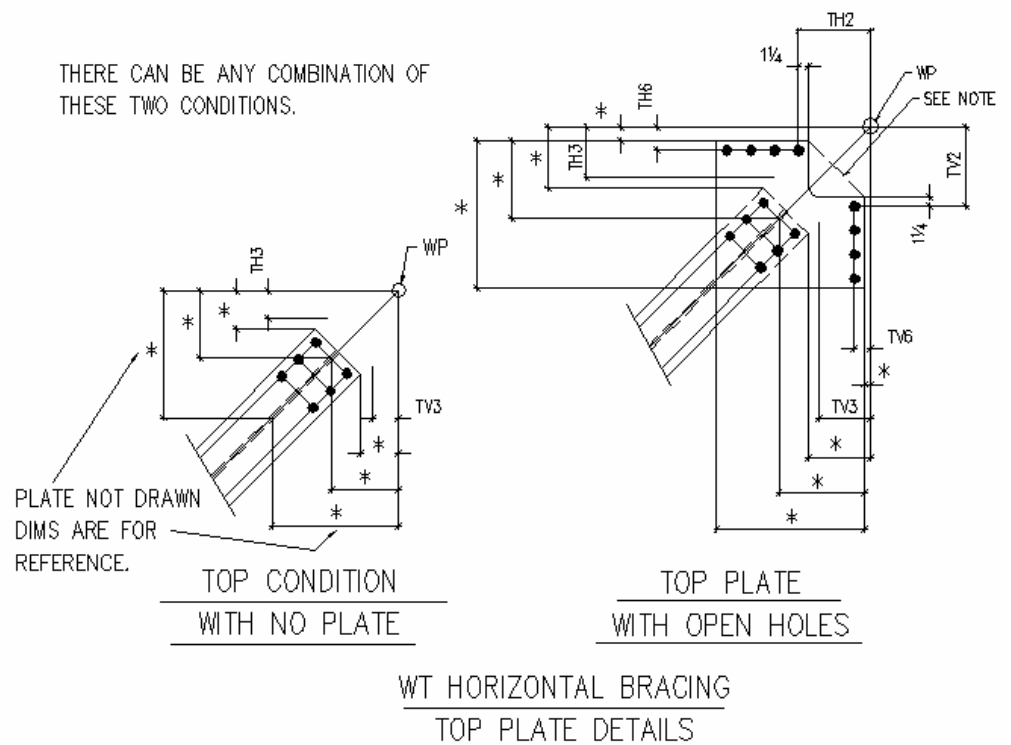
WT Brace Top Plate Details



NOTES !!

1. * INDICATES CALCULATED DIMENSION.
2. CLEARANCE DISTANCE IS SET AT 3/4".
3. WHEN YOU ENTER A CLEARANCE (TH3 OR TV3) THE PROGRAM WILL CHECK TO INSURE THE BRACE WILL CLEAR THE CLIP ANGLES OR HOLES OR CORNER CUT IN PLATE FOR COLUMN.

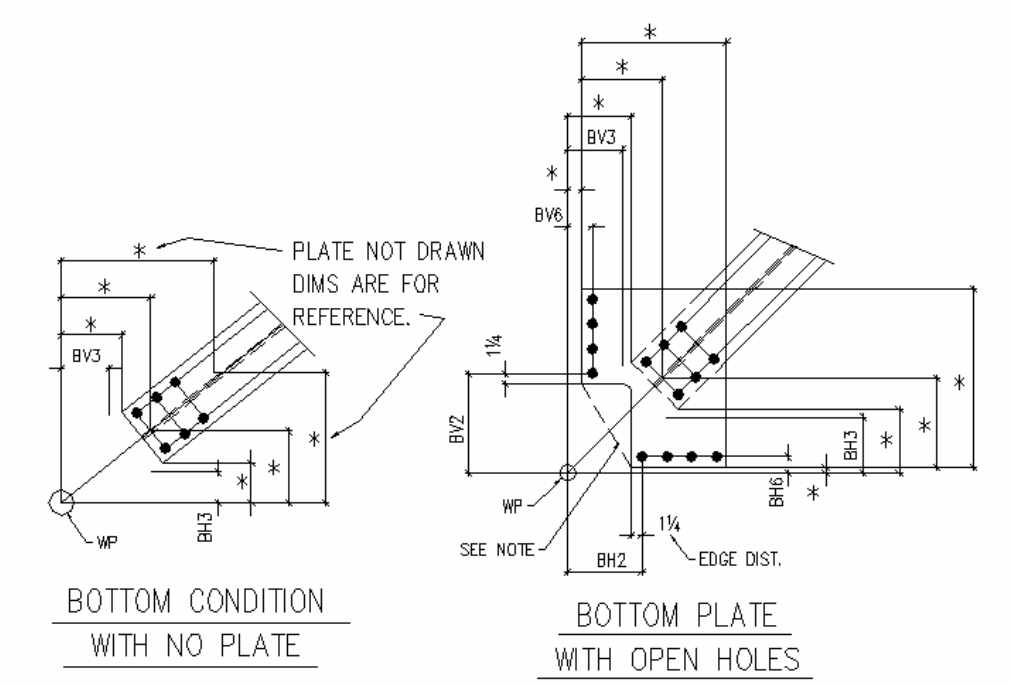
TOP PLATE
WITH CLIP ANGLES

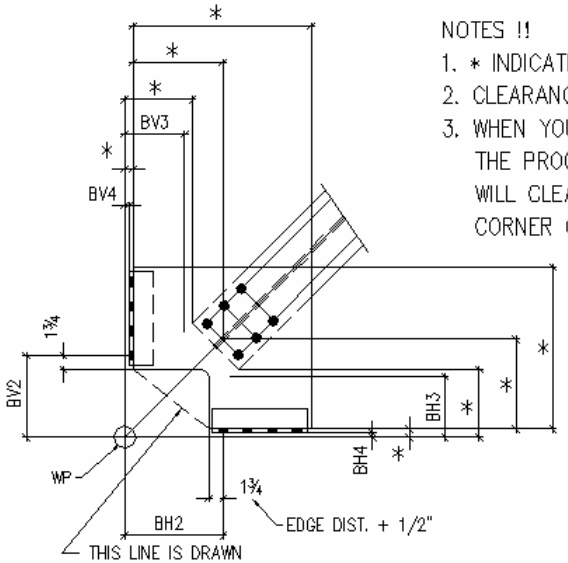


WT HORIZONTAL BRACING
TOP PLATE DETAILS

SSDCP Manual

WT Brace Bottom Plate Details


PLATE NOT DRAWN
DIMS ARE FOR
REFERENCE.
BV3
BH3
WP
BOTTOM CONDITION
WITH NO PLATE
BV3
BV6
1¼
BV2
BH3
BH6
WP
SEE NOTE
1¼
BH2
EDGE DIST.
BOTTOM PLATE
WITH OPEN HOLES



BOTTOM PLATE WITH CLIP ANGLES

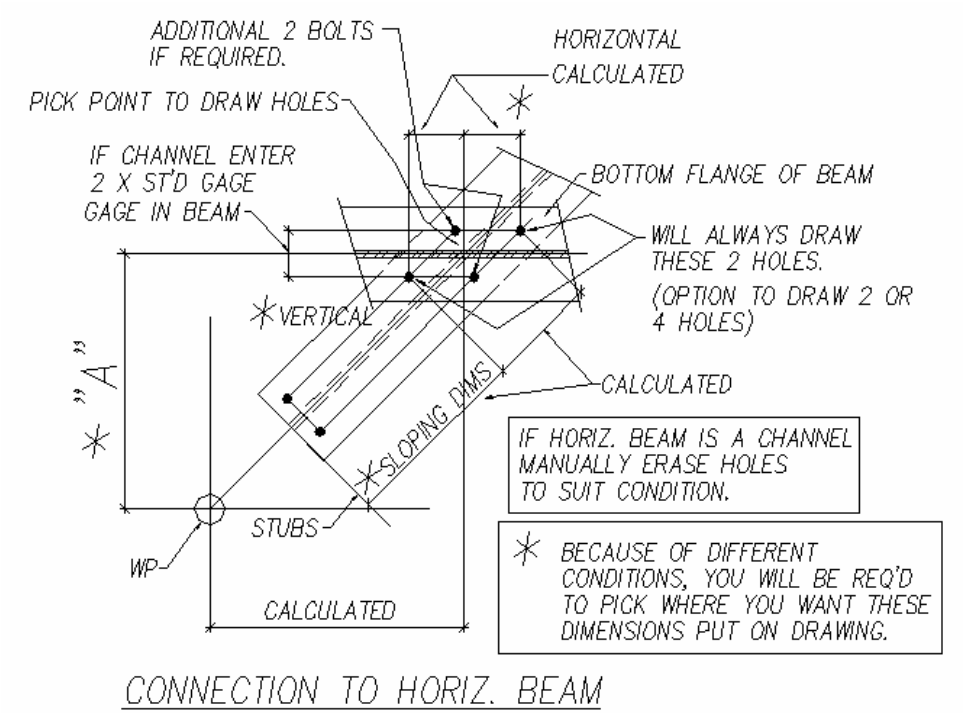
NOTES !!

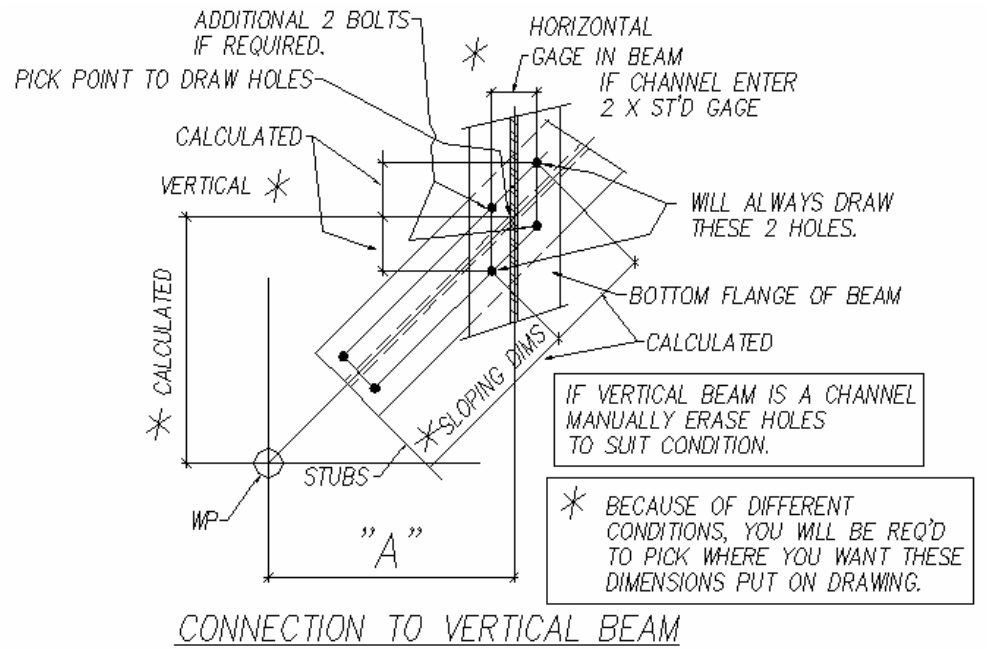
1. * INDICATES CALCULATED DIMENSION.
2. CLEARANCE DISTANCE IS SET AT 3/4".
3. WHEN YOU ENTER A CLEARANCE (BH3 OR BV3) THE PROGRAM WILL CHECK TO INSURE THE BRACE WILL CLEAR THE CLIP ANGLES OR HOLES OR CORNER CUT IN PLATE FOR COLUMN.

THERE CAN BE ANY COMBINATION OF THESE TWO CONDITIONS.

SSDCP Manual

WT Brace Connections to Interior Beams


ADDITIONAL 2 BOLTS IF REQUIRED.
HORIZONTAL CALCULATED
PICK POINT TO DRAW HOLES
IF CHANNEL ENTER 2 X ST'D GAGE GAGE IN BEAM
BOTTOM FLANGE OF BEAM
WILL ALWAYS DRAW THESE 2 HOLES.
(OPTION TO DRAW 2 OR 4 HOLES)
VERTICAL
"A"
CALCULATED
SLOPING DIMS
IF HORIZ. BEAM IS A CHANNEL MANUALLY ERASE HOLES TO SUIT CONDITION.
STUBS
WP
CALCULATED
BECAUSE OF DIFFERENT CONDITIONS, YOU WILL BE REQ'D TO PICK WHERE YOU WANT THESE DIMENSIONS PUT ON DRAWING.
CONNECTION TO HORIZ. BEAM


ADDITIONAL 2 BOLTS IF REQUIRED.
HORIZONTAL GAGE IN BEAM IF CHANNEL ENTER 2 X ST'D GAGE
PICK POINT TO DRAW HOLES
CALCULATED
VERTICAL
WILL ALWAYS DRAW THESE 2 HOLES.
BOTTOM FLANGE OF BEAM
CALCULATED
CALCULATED
SLOPING DIMS
IF VERTICAL BEAM IS A CHANNEL MANUALLY ERASE HOLES TO SUIT CONDITION.
STUBS
WP
"A"
BECAUSE OF DIFFERENT CONDITIONS, YOU WILL BE REQ'D TO PICK WHERE YOU WANT THESE DIMENSIONS PUT ON DRAWING.
CONNECTION TO VERTICAL BEAM

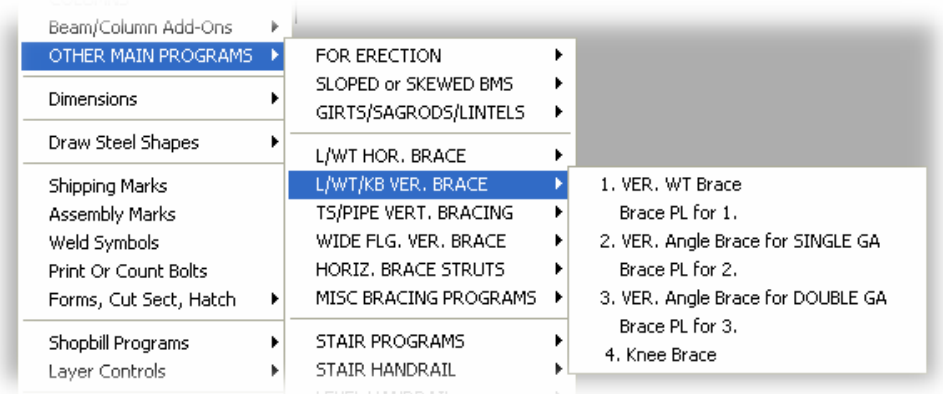
Angle and WT Bracing

DESCRIPTION

This program is for either type of vertical bracing. This program will write files in your AutoCAD directory to be used when you start to draw the bracing plates on the beams or columns. The program will use the shipping mark and a .HOR extension for the file name. An example of this would be 3D1.HOR. If the brace starts and stops at the cross point, the file will use the first shipping mark for the file name, even if you have two shipping marks. Use caution if you have two different jobs you are working on and the brace shipping marks could be the same. If the shipping marks do happen to be the same, this could cause the files for 2nd job to overwrite the files for the 1st job. After you have finished the job and no longer need the brace files, you can erase all files that have a .HOR extension

SSDCP Manual

COMMAND



OPTIONS:

1. Any size angle or wt brace bolted thru stem with single gage line.
2. Either 1 or 2 angles back to back.
3. Will draw & space fills if required (bar or ring fills).
4. Intersection point of X bracing can be: open hole, bolted plate or the bracing will stop and start.
5. Will write files for detailing plates on beams or columns.
6. Several different configurations of plates are available.
7. Loads can be entered or program will calculate loads based on brace size for number of bolts required in brace and vertical. Connections in ls, if bolted to column. When the loads are given, the program uses 50% of the effective strength for comparison.
   SSDCP does not assume any responsibility for this design.
8. The program will only draw bracing from lower left to upper right. You may mirror the picture afterwards if you wish.

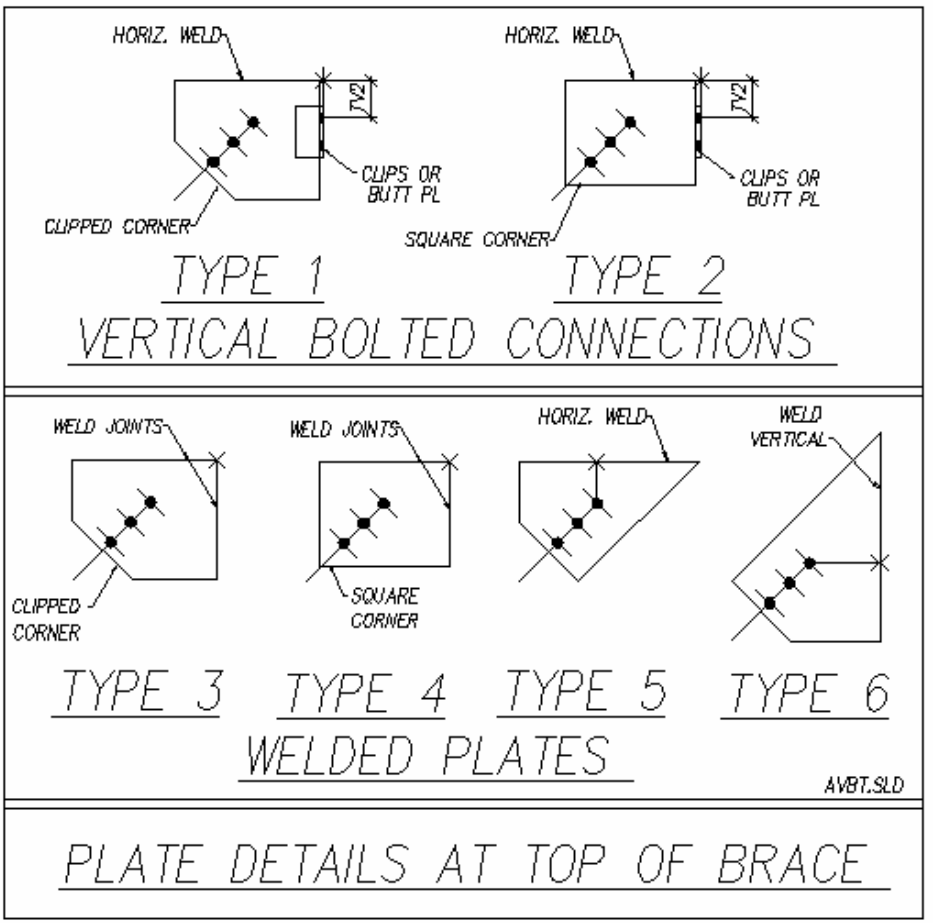
DRAWING SCALE: 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program by pressing Ctrl-C on your keyboard. Restart the program. Enter your inputs carefully.

Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.

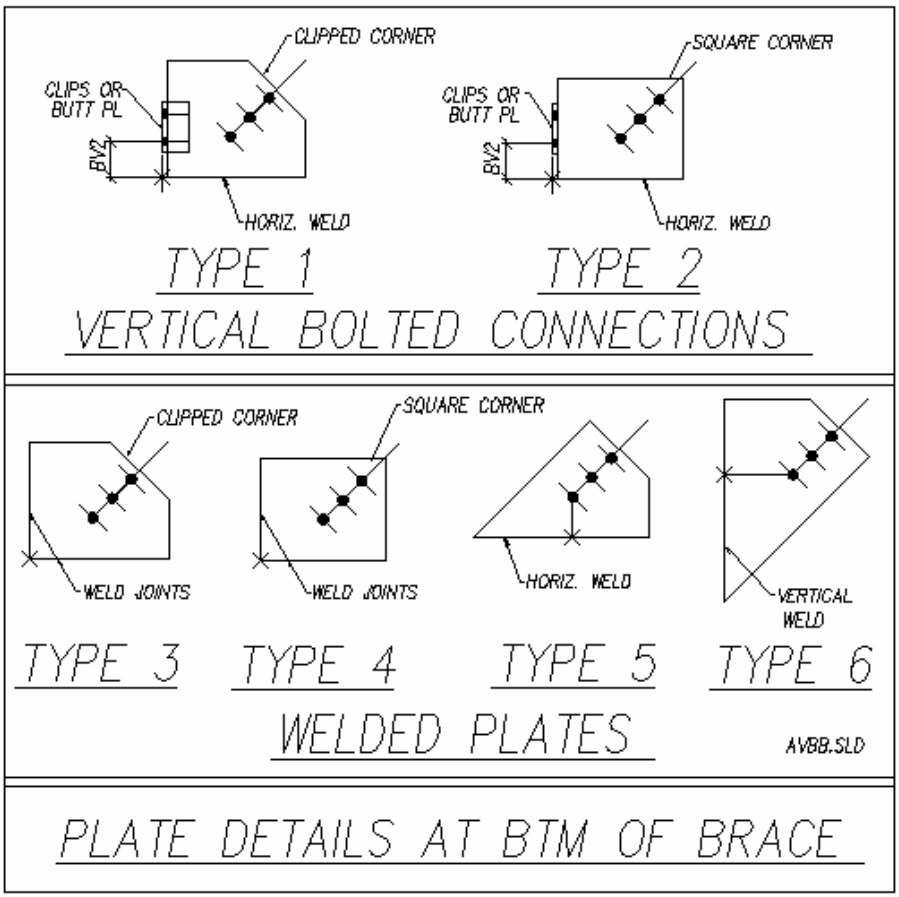
SSDCP Manual

Angle Vertical Bracing Top Plate Details

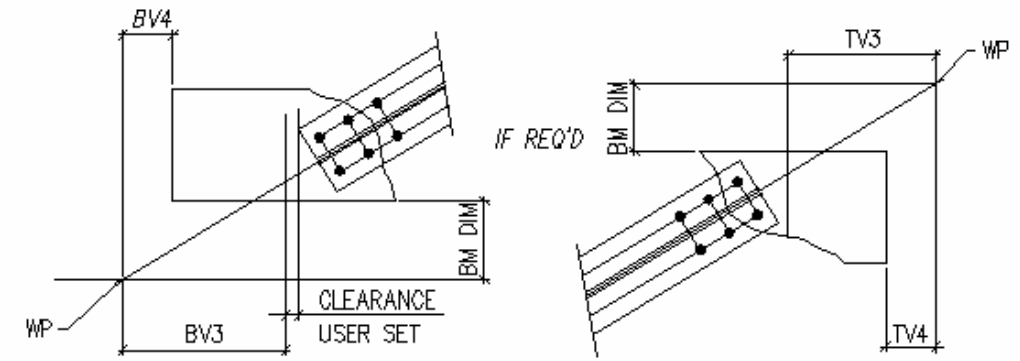


SSDCP Manual

Angle Vertical Bracing Bottom Plate Details



WT Vertical Bracing Details



DETAIL AT BOTTOM

DETAIL AT TOP

NOTE: PLATES SHOWN ARE FOR CLEARANCE PURPOSE ONLY. MAY NOT BE TYPE YOU HAVE CHOSEN TO DRAW.

INPUT FOR CLEARANCE DIMENSIONS FOR PLATES WITH NO VERTICAL CONNECTIONS

WT VERTICAL BRACING DETAILS

SSDCP Manual

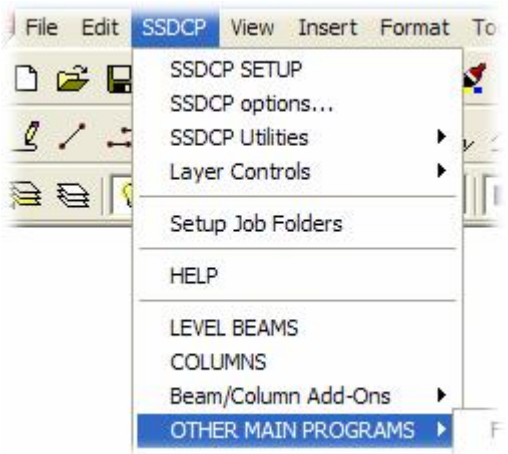
WT BRACING

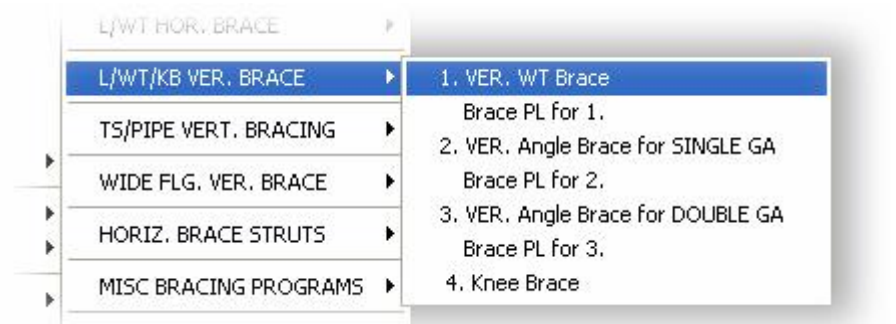
Bracing for WT's

DESCRIPTION

This program draws WT vertical bracing. This program writes files in your AutoCAD directory to be used when you start to draw the bracing plates on the beams or columns.

COMMAND




L/WT/KB VER. BRACE
TS/PIPE VERT. BRACING
WIDE FLG. VER. BRACE
HORIZ. BRACE STRUTS
MISC BRACING PROGRAMS
1. VER. WT Brace
Brace PL for 1.
2. VER. Angle Brace for SINGLE GA
Brace PL for 2.
3. VER. Angle Brace for DOUBLE GA
Brace PL for 3.
4. Knee Brace

SSDCP Manual

The program will use the shipping mark and .HOR extension for the file name. An example of this would be 3D1.HOR. If the brace starts and stops at the cross point, the file will use the first shipping mark for the file name, even if there are two shipping marks.

Use caution if you have two different jobs you are working on and the brace shipping marks could be the same. This could cause the files for the 2nd job to overwrite the files for the first job if the shipping marks do happen to be the same. After you have finished the job and no longer need the brace files, you can erase all files that have a .HOR extension name from your AutoCAD directory.

WT Brace, connections and bevel are drawn to scale. The length from W.P. TO W.P is not drawn to scale. You will have an option to let the computer determine how big to draw picture or you may decide.

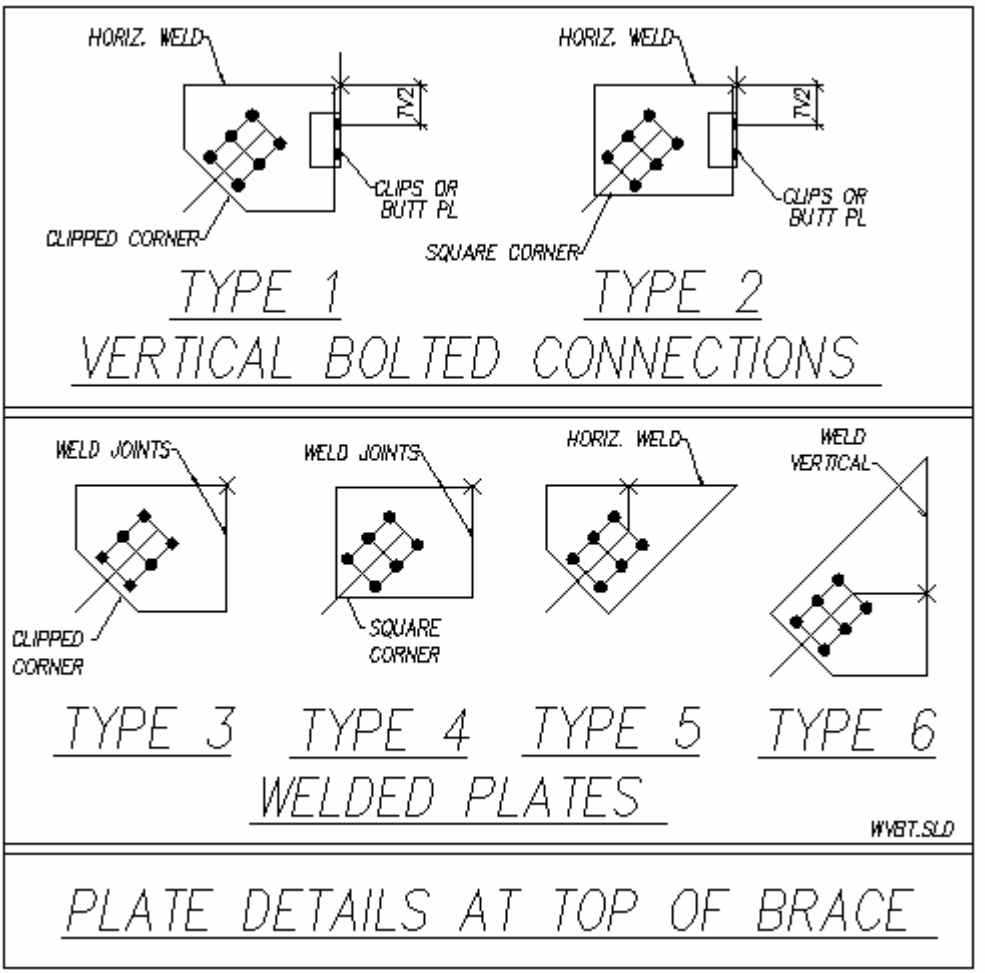
Options

1. Any size WT brace bolted through flange.
2. X bracing cross point can be open holes, bolted plate, or brace. Will stop and start.
3. Will write files to draw connection plates on beams or columns.
4. Several different configurations of plates are available.
5. Loads can be entered or the program will calculate loads. The program will base loads on brace size for the number of bolts required in the brace and vertical & horizontal connections in plates. When the loads are given, the program uses 50% of the effective strength for comparison. SSDCP, Inc. does not assume any responsibility for this design.
6. The program will only draw bracing from the lower left to the upper right. You may mirror the picture afterwards if you wish.

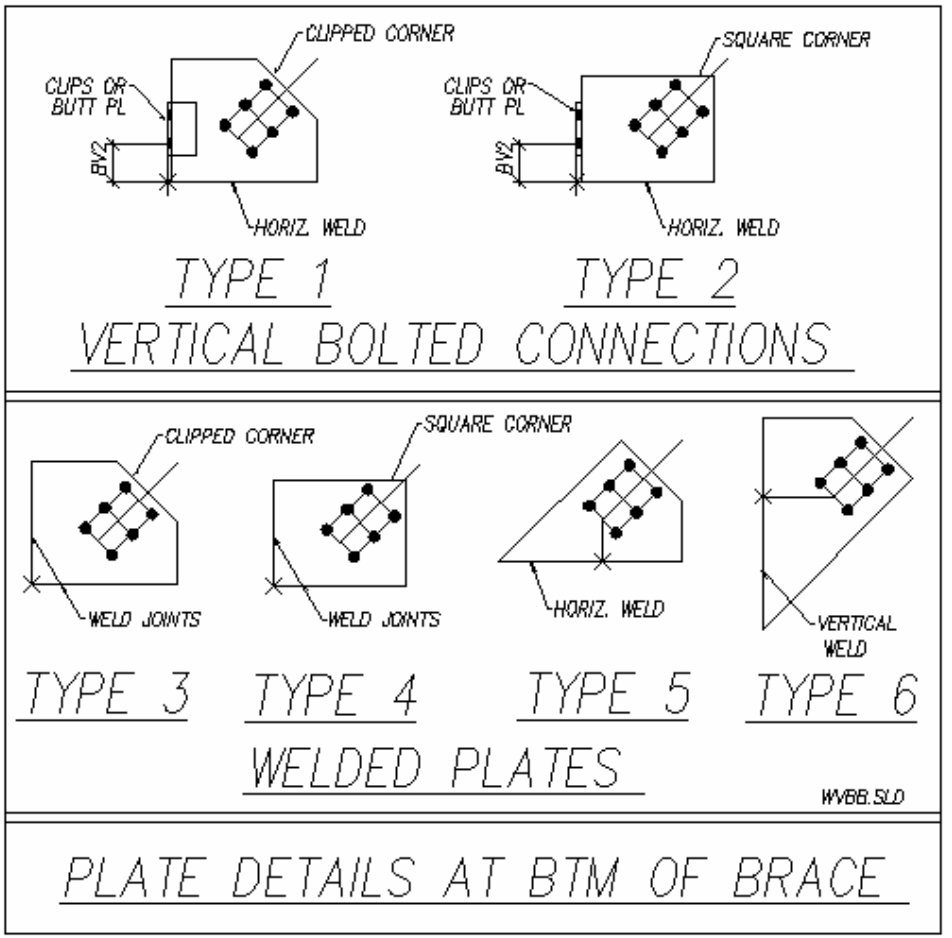
DRAWING SCALE: 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs.

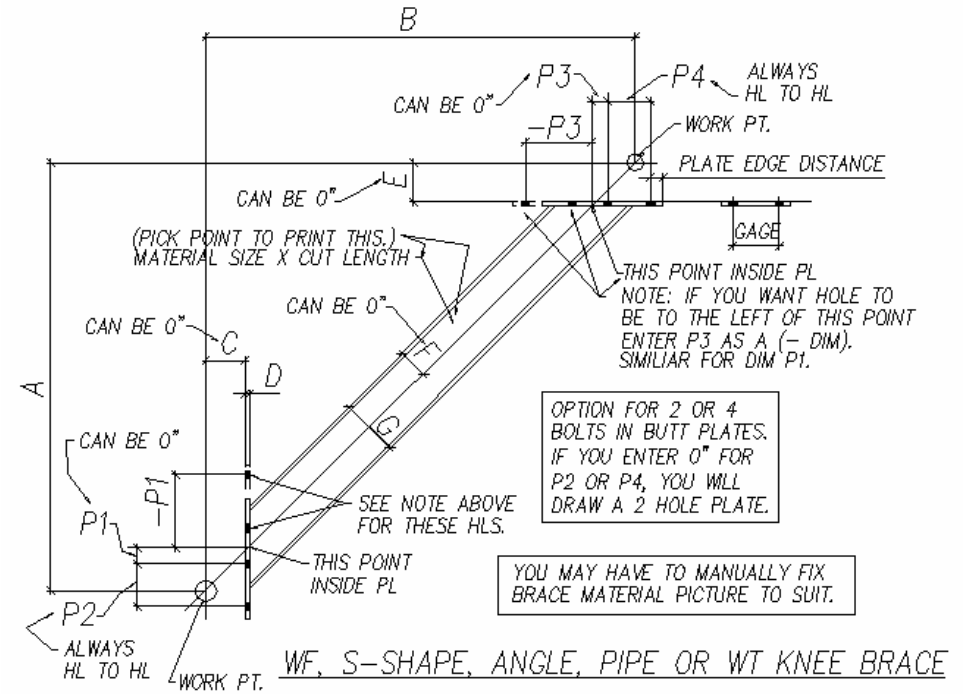
WT Vertical Bracing Top Plate Details



WT Vertical Bracing Bottom Plate Details



Angle, Pipe or WT Knee Brace



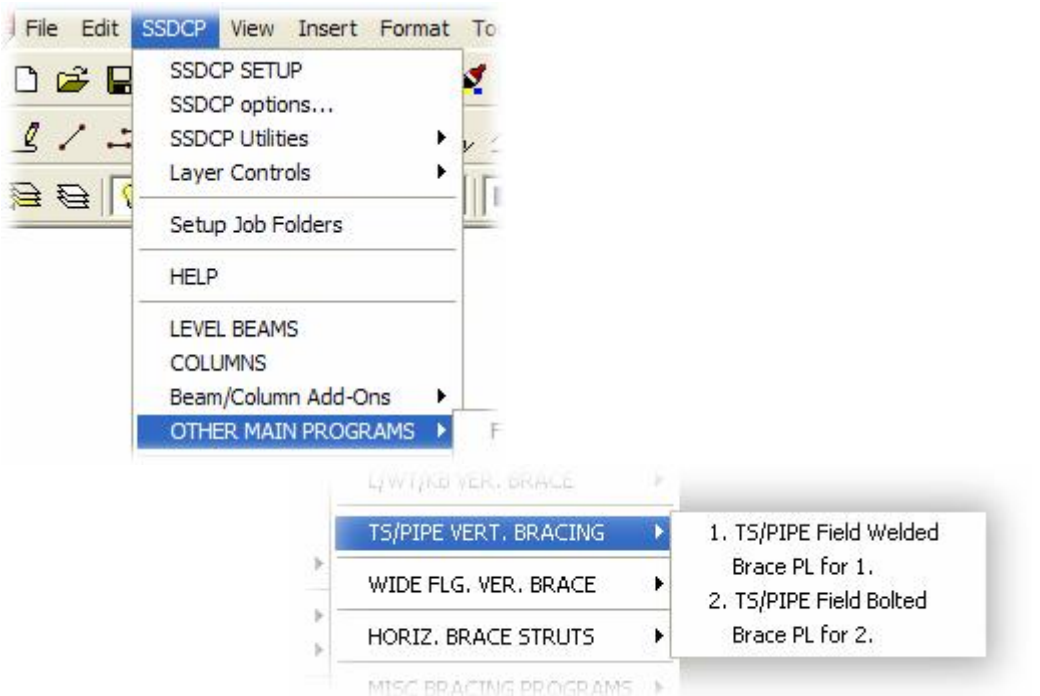
SSDCP Manual

TS/PIPE BRACING

Tube Steel and Pipe Bracing

DESCRIPTION
This program draws tube steel vertical bracing or pipe vertical bracing. This program will only put one fit-up hole in the brace. The amount of field weld will be calculated by the load or strength of member entered. It will also calculate the length of slot required in brace to fit over the bracing plate.

COMMAND



This program will write files in your AutoCAD directory to be used when you start to draw the bracing plates on the beams and/or columns. The program will use the shipping mark and a .VER extension for the file name. An example of this would be 3D1.VER

cause the files for the 2nd job to overwrite the files for the 1st job. The chances of this occurring are low, but it could happen. After you have finished the job and no longer need the brace files, you can erase all files that have a .VER extension name from your AutoCAD directory.

DRAWING SCALE: 1"=1' or MM equivalent

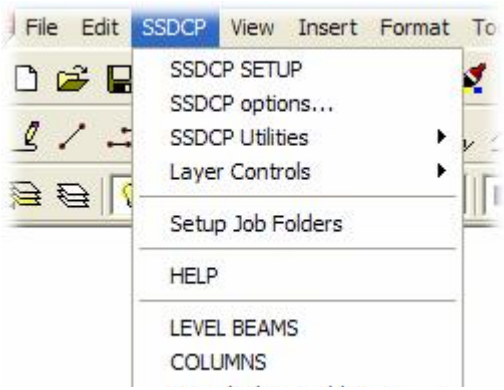
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs.

Bracing Plates For TS and Pipe

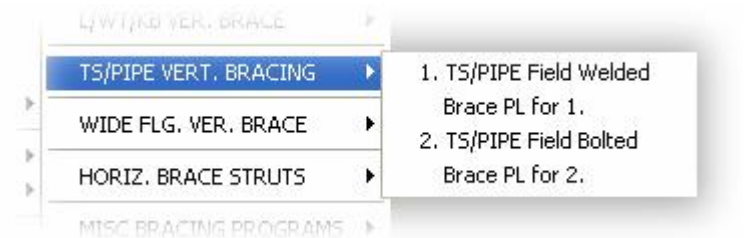
DESCRIPTION

This program draws bracing plates for TS/PIPE vertical bracing. All information to draw plate will be read from a file created when you detailed the brace. This eliminates a lot of questions the program and these files can be given to another detailer for his use when detailing beams Normally, you will use this program right after you have detailed the beam or column that this brace bolts to. Make sure you allow enough room to draw this plate. You may have to move s things out of the way before running this program.

COMMAND



SSDCP Manual



Note: Do not get confused with Standard Vertical Bracing Pl. program

SUGGESTION
"ZOOM A WINDOW" on the beam or column you are going to add this plate to before runnin program. If you don't get the plate in the right place to start with, you can use the "MOVE" command to position it exactly after the plate has been drawn.

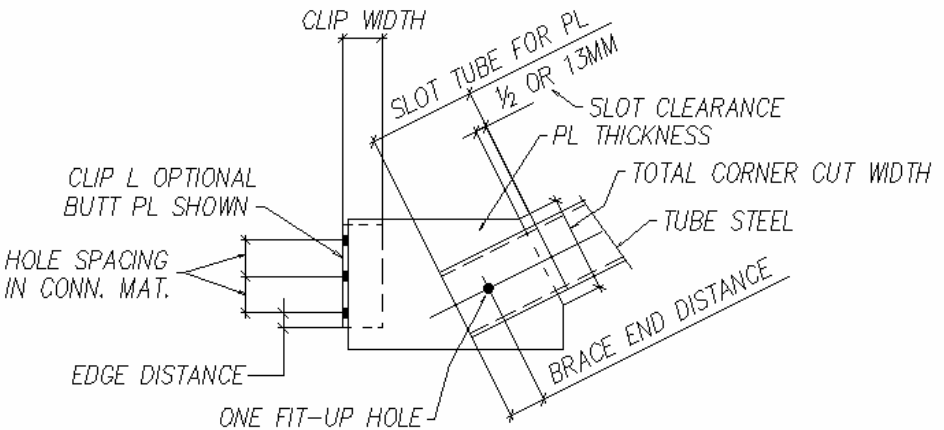
OPTIONS
1. Tie up hole to brace work point
2. Only requires you to know the shipping mark for the brace
3. Will calculate stub dimensions to the hole in the place from the left end of the beam or the bottom of the column.
4. You will have the choice to draw the plate in only two different quadrants, depending on the bevel of the brace and which end this brace plate is for (top or bottom of brace).

DRAWING SCALE: 1"=1' or MM equivalent

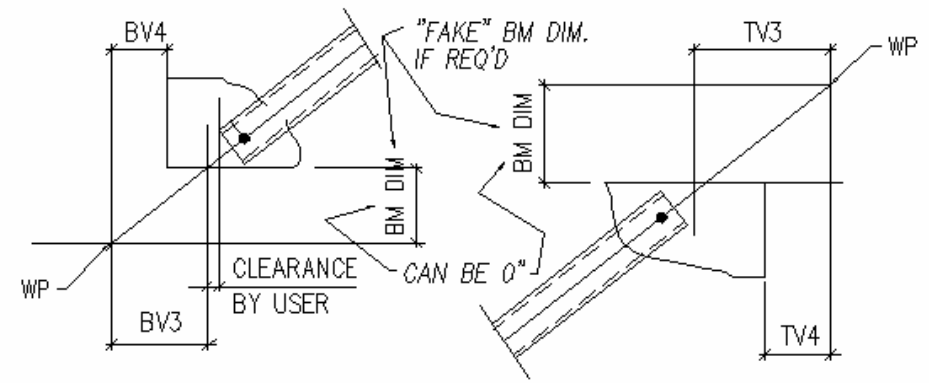
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs.

Field Welded

TS Vertical Brace Details



INPUT FOR GLOBAL QUESTIONS
FOR TS VERTICAL BRACING



DETAIL AT BOTTOM

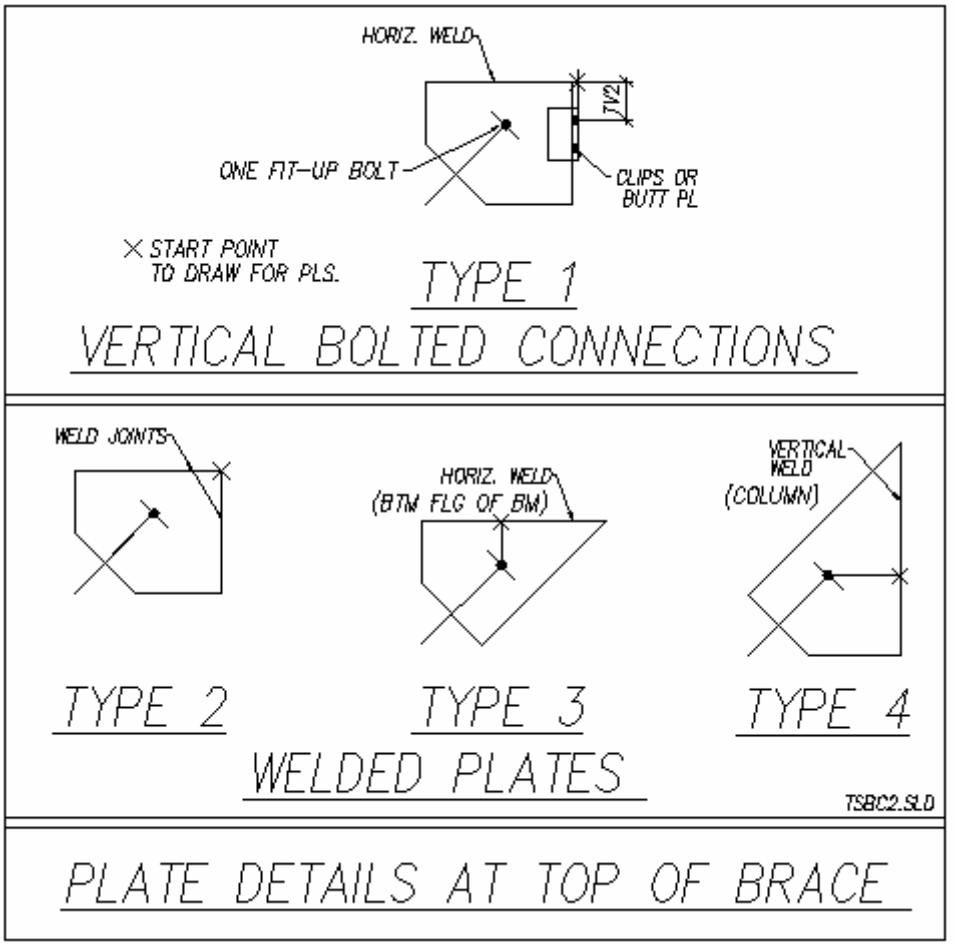
NOTE: BV3, BV4, TV3, TV4 CAN BE 0"

DETAIL AT TOP

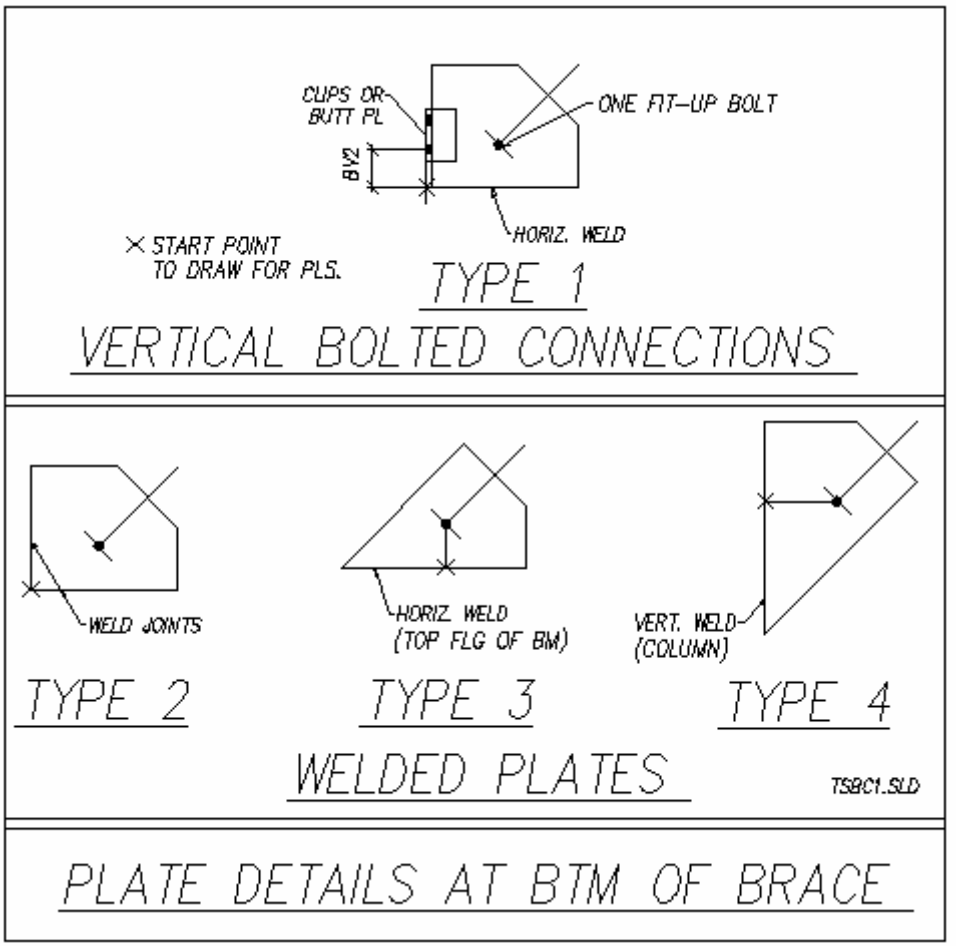
NOTE: PLATES SHOWN ARE FOR CLEARANCE PURPOSE ONLY. MAY NOT BE TYPE YOU HAVE CHOSEN TO DRAW.

INPUT FOR CLEARANCE DIMENSIONS FOR PLATES WITH NO VERTICAL CONNECTIONS

TS Bracing Top Plate Details

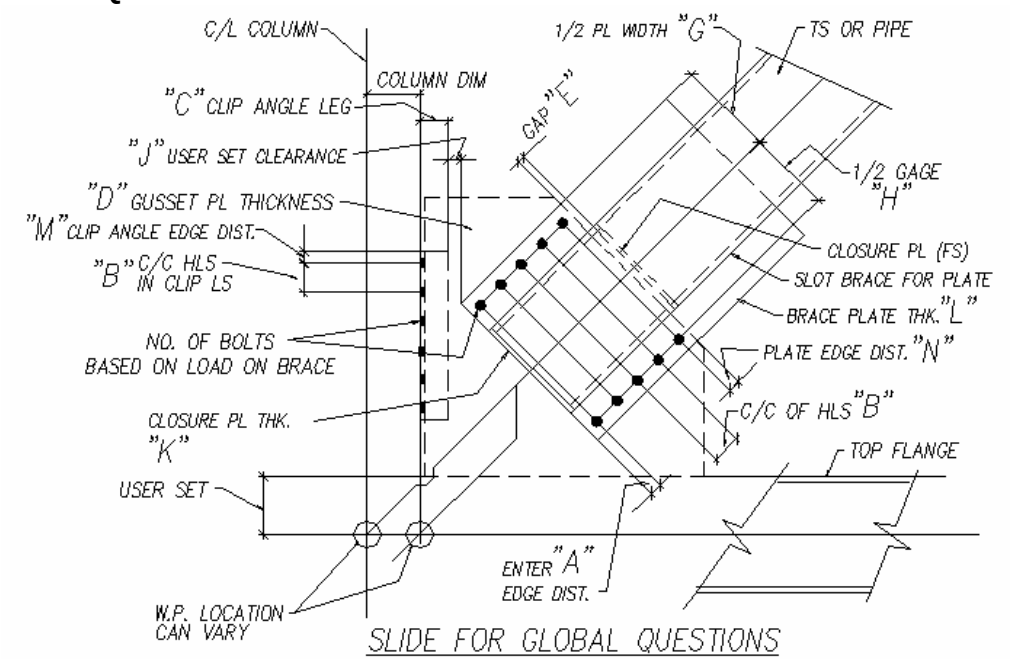


TS Bracing Bottom Plate Details

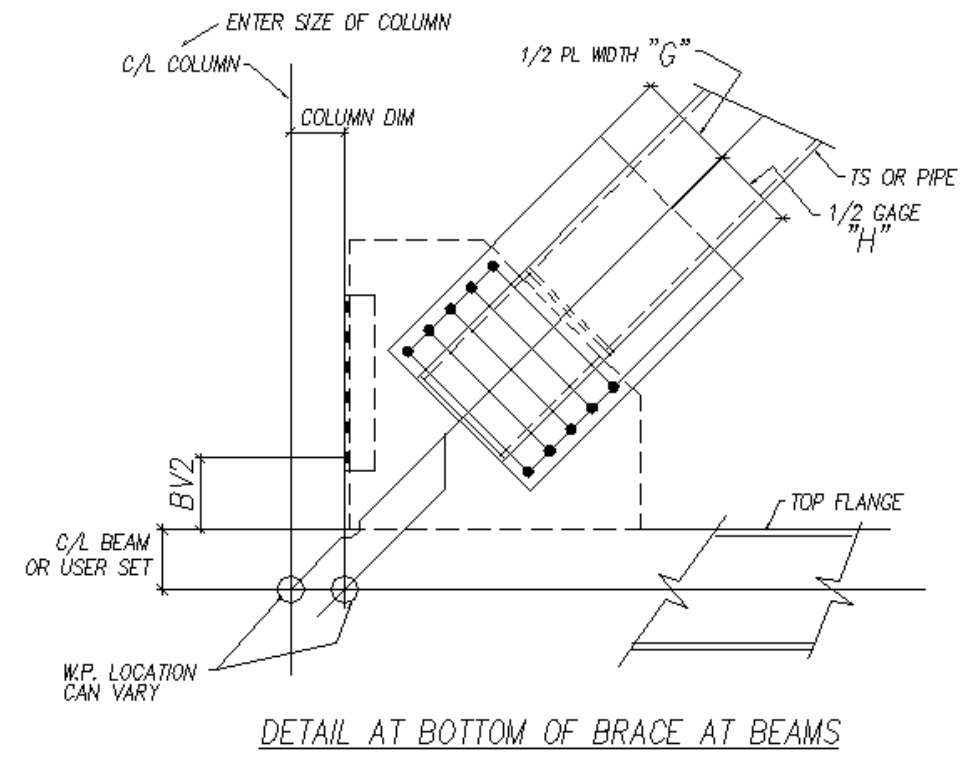


Field Bolted

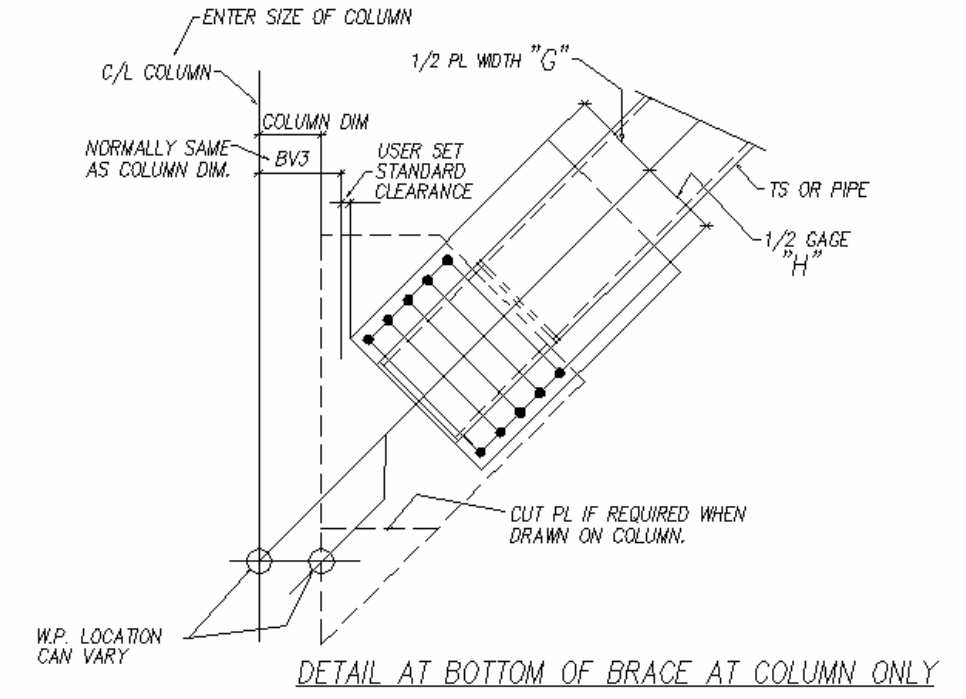
Global Questions



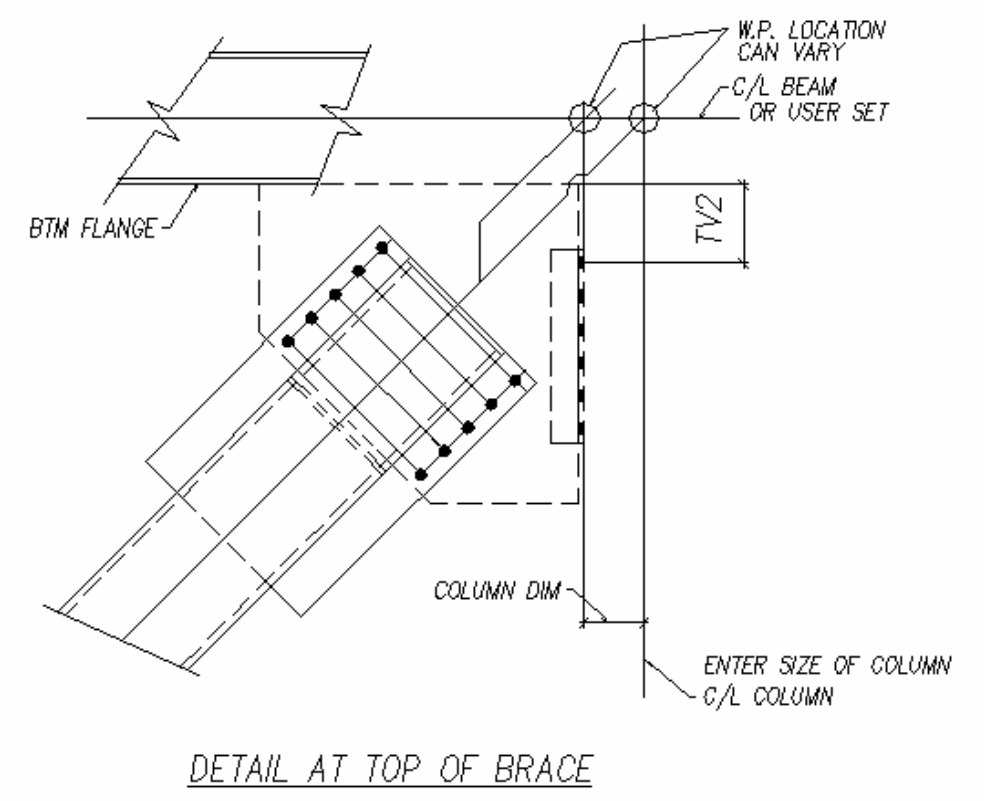
Bottom Brace Details at Beams



Bottom Brace Details at Columns

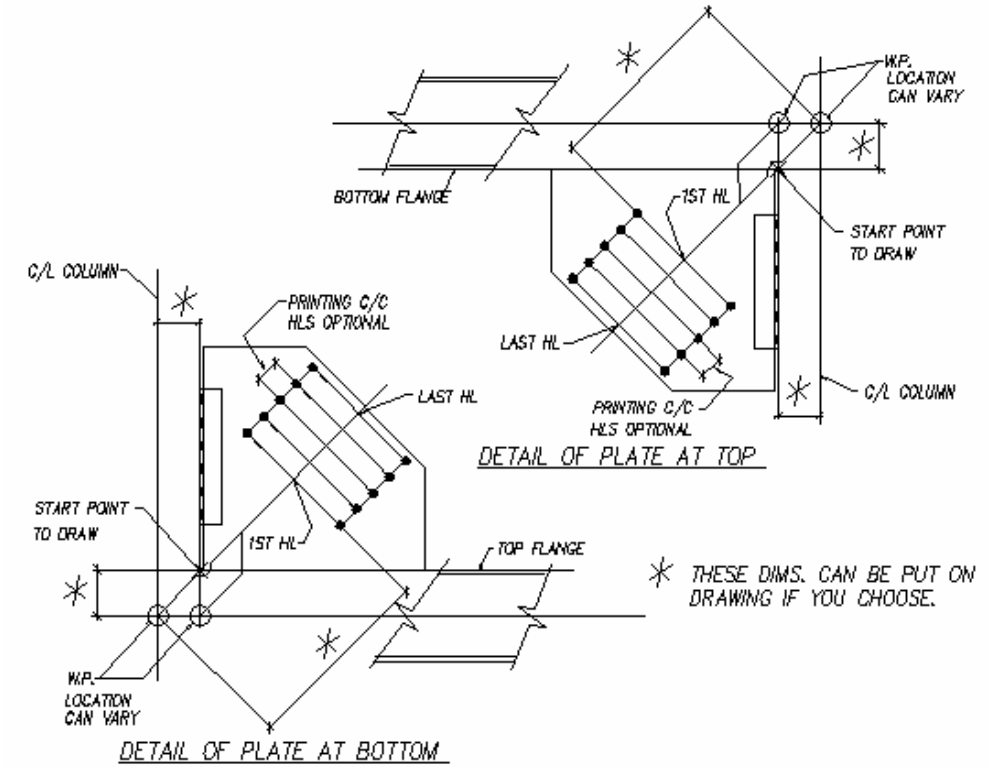

ENTER SIZE OF COLUMN
C/L COLUMN
COLUMN DIM
NORMALLY SAME AS COLUMN DIM.
BV3
USER SET STANDARD CLEARANCE
1/2 PL WIDTH "G"
TS OR PIPE
1/2 GAGE "H"
CUT PL IF REQUIRED WHEN DRAWN ON COLUMN.
W.P. LOCATION CAN VARY
DETAIL AT BOTTOM OF BRACE AT COLUMN ONLY

Top Brace Detail



SSDCP Manual

TS Bracing Plates at Beams & Columns

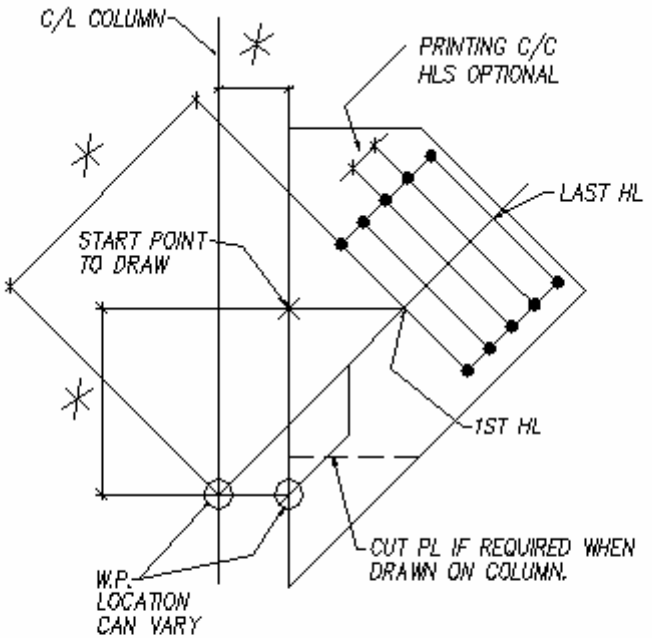


DETAIL OF PLATE AT TOP

DETAIL OF PLATE AT BOTTOM

TYPICAL DETAIL OF BRACING PLATES
FOR BOLTED VERTICAL TS OR PIPE BRACING

TS Bracing Plates at Columns Only



DETAIL AT PLATE AT COLUMN ONLY

TYPICAL DETAIL OF BRACING PLATES
FOR BOLTED VERTICAL TS OR PIPE BRACING

Plate Details at Top of Brace

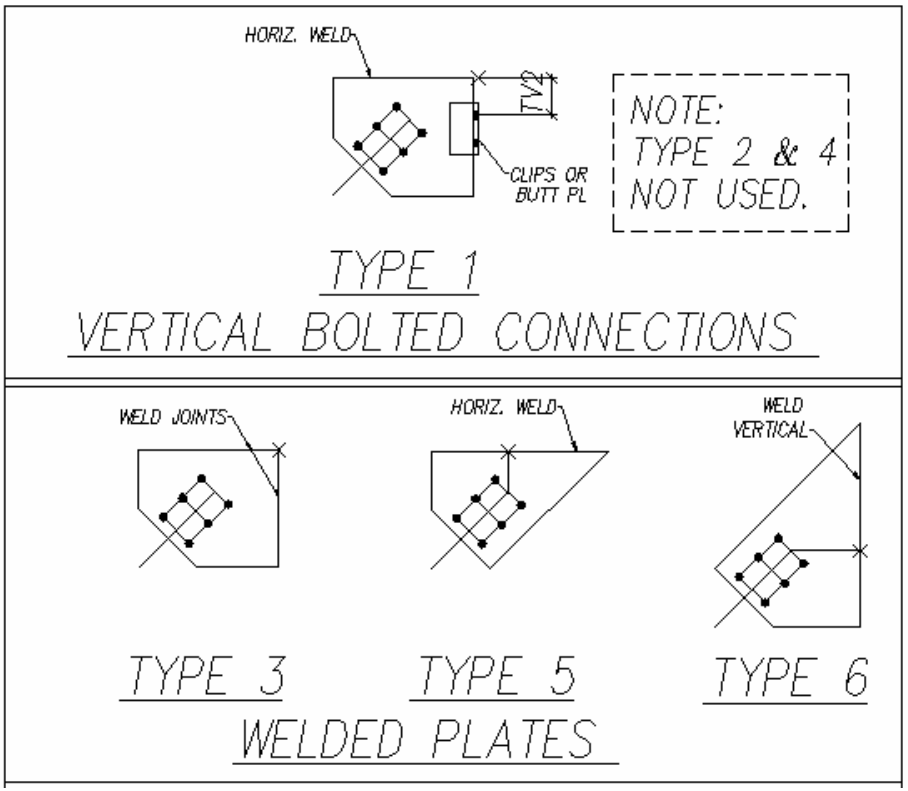
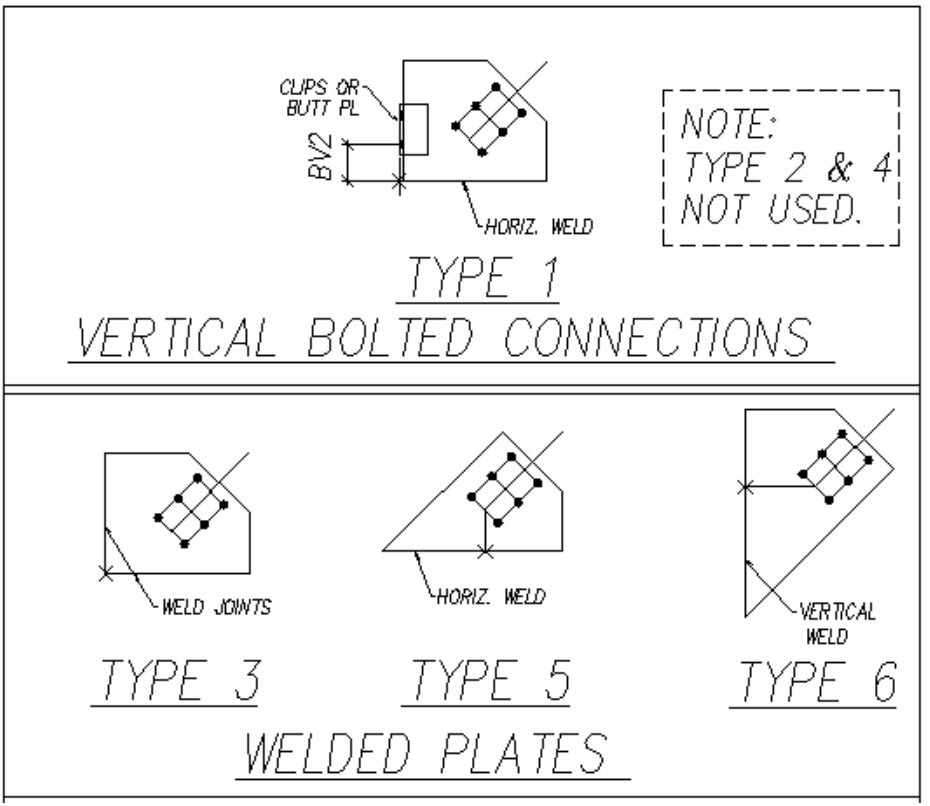


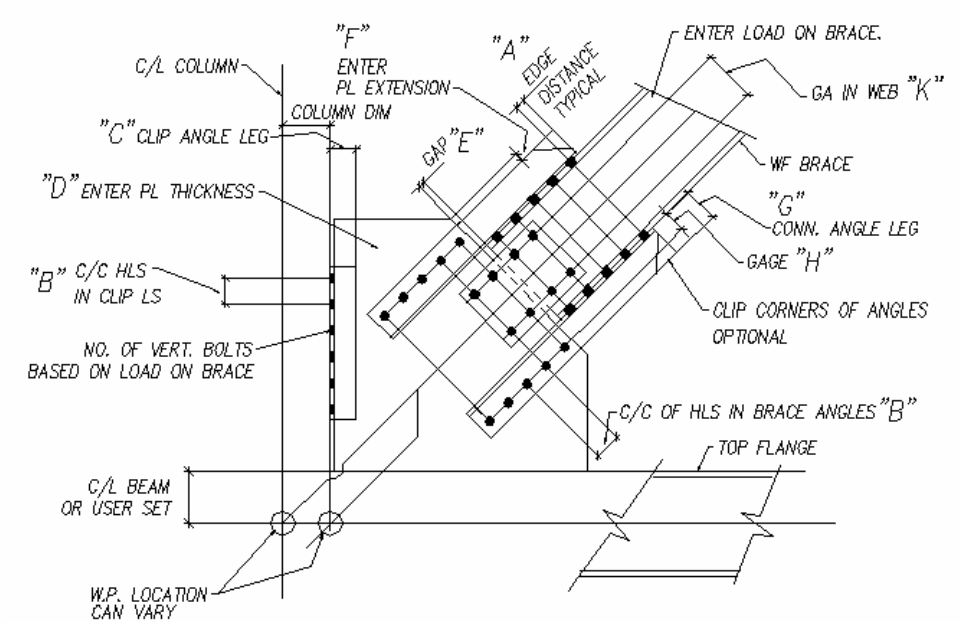
Plate Details at Bottom of Brace



SSDCP Manual

WF BRACING

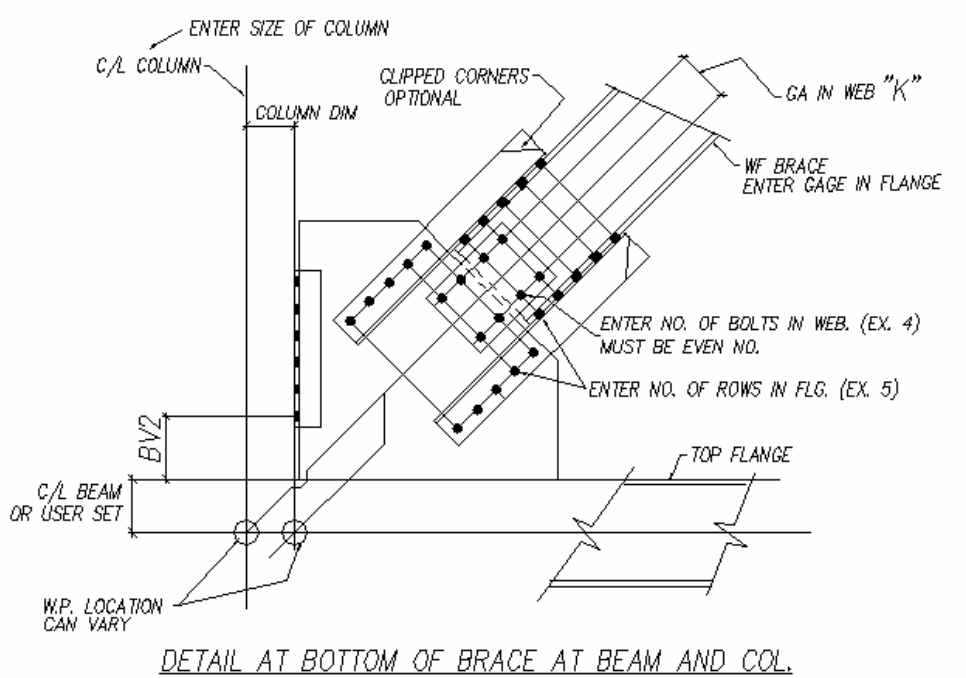
Flange and Web Bolted
Global Questions



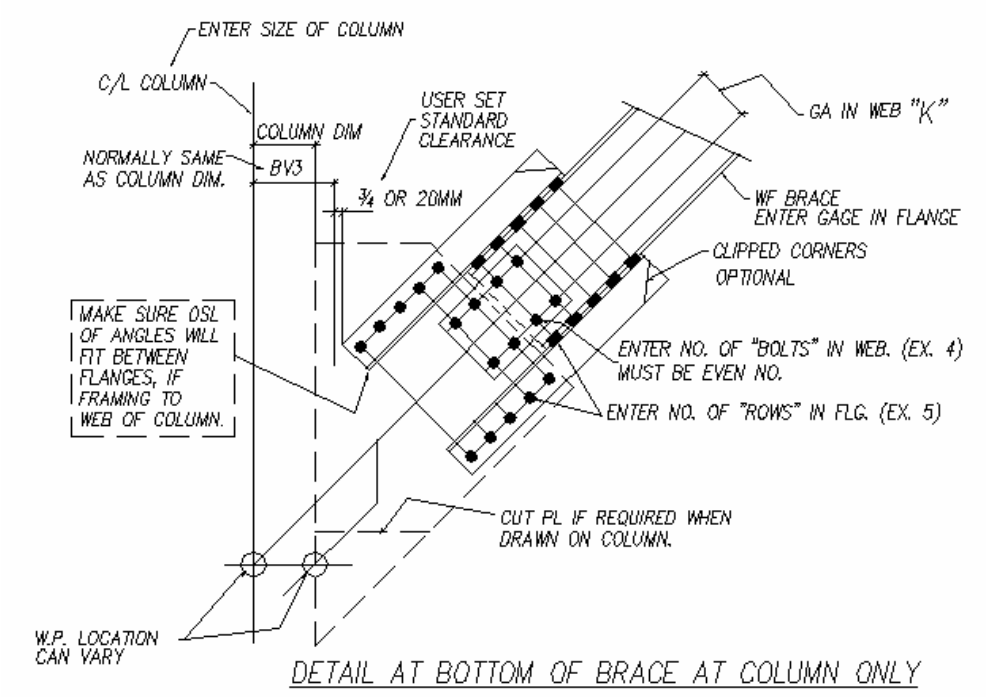
SLIDE FOR GLOBAL QUESTIONS

SSDCP Manual

Bottom of Brace (Beams and Columns)

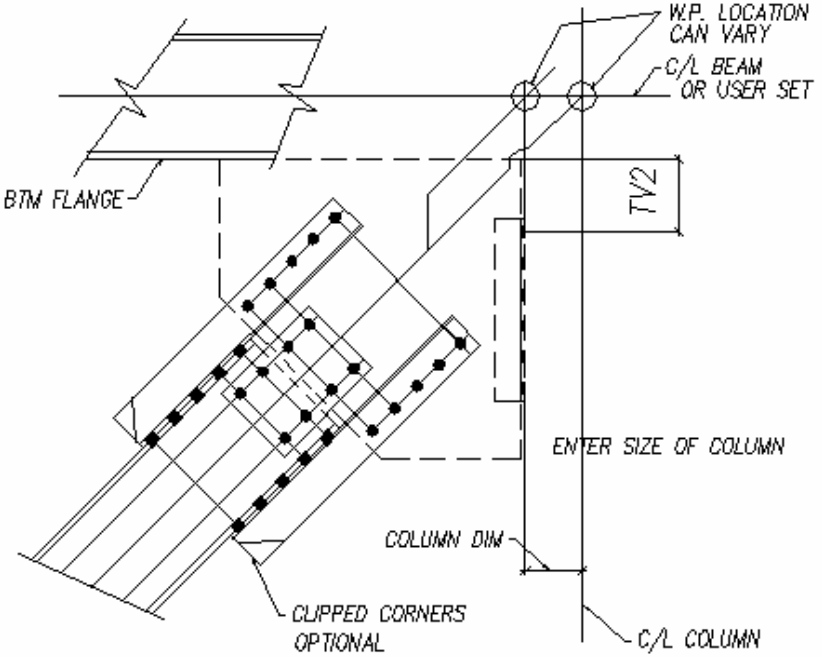

ENTER SIZE OF COLUMN
C/L COLUMN
COLUMN DIM
CLIPPED CORNERS OPTIONAL
GA IN WEB "K"
WF BRACE ENTER GAGE IN FLANGE
ENTER NO. OF BOLTS IN WEB. (EX. 4) MUST BE EVEN NO.
ENTER NO. OF ROWS IN FLG. (EX. 5)
BV2
TOP FLANGE
C/L BEAM OR USER SET
W.P. LOCATION CAN VARY
DETAIL AT BOTTOM OF BRACE AT BEAM AND COL.

Bottom of Brace at Column Only


ENTER SIZE OF COLUMN
C/L COLUMN
COLUMN DIM
NORMALLY SAME AS COLUMN DIM.
BV3
USER SET STANDARD CLEARANCE
3/4 OR 20MM
GA IN WEB "K"
WF BRACE ENTER GAGE IN FLANGE
CLIPPED CORNERS OPTIONAL
MAKE SURE OSL OF ANGLES WILL FIT BETWEEN FLANGES, IF FRAMING TO WEB OF COLUMN.
ENTER NO. OF "BOLTS" IN WEB. (EX. 4) MUST BE EVEN NO.
ENTER NO. OF "ROWS" IN FLG. (EX. 5)
CUT PL IF REQUIRED WHEN DRAWN ON COLUMN.
W.P. LOCATION CAN VARY
DETAIL AT BOTTOM OF BRACE AT COLUMN ONLY

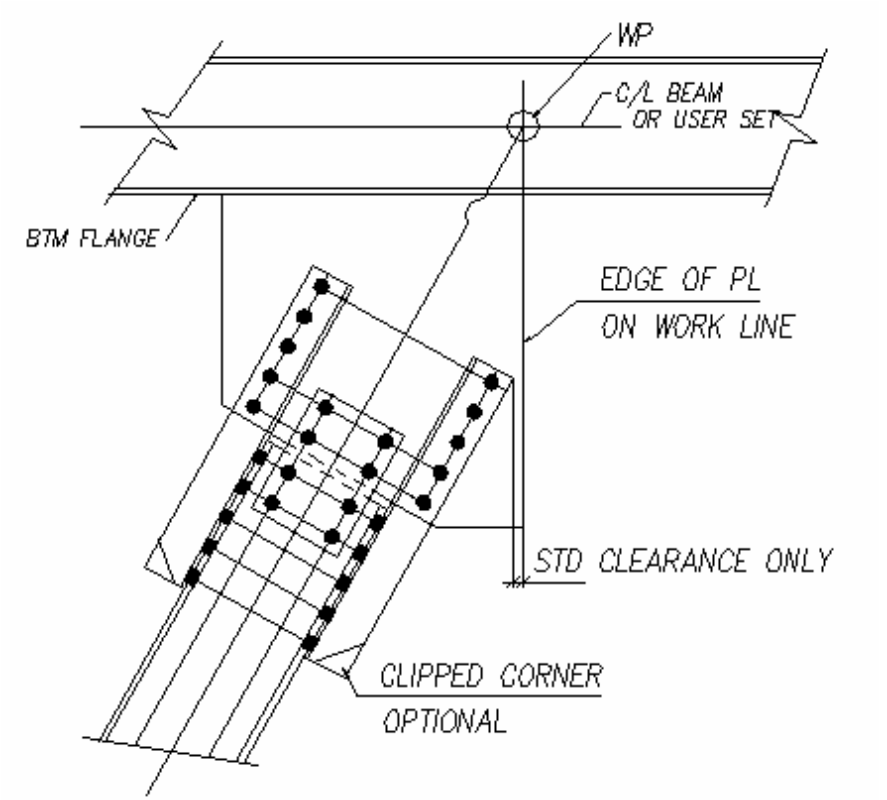
SSDCP Manual

Top of Brace Detail



DETAIL AT TOP OF BRACE AT COLUMN

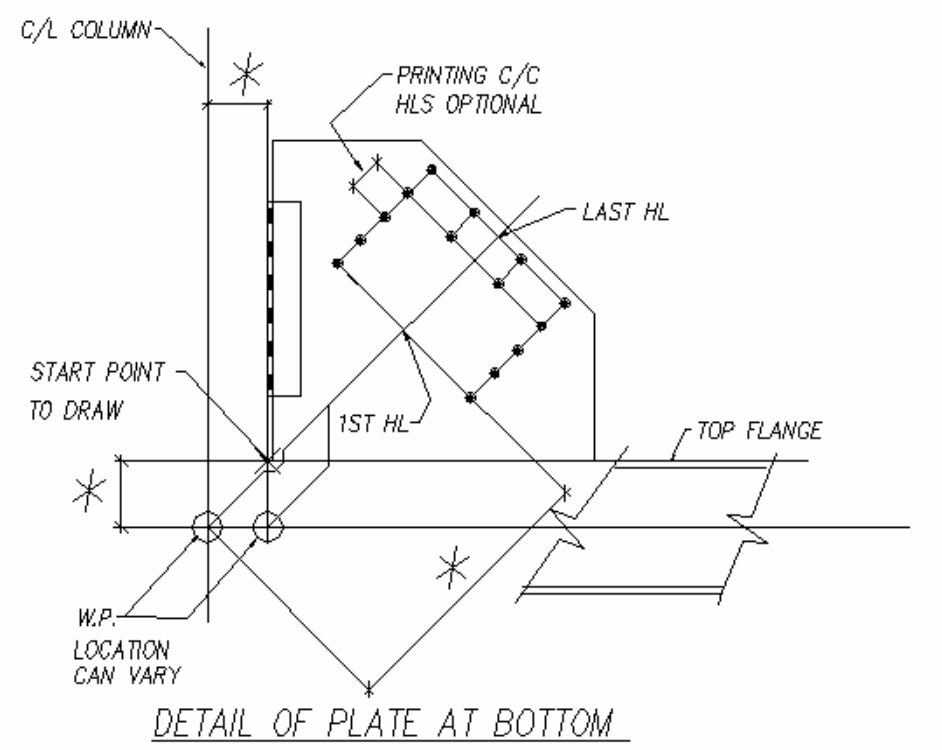
TYPE 1



DETAIL AT TOP OF BRACE. (NO COLUMN)
TYPE 2

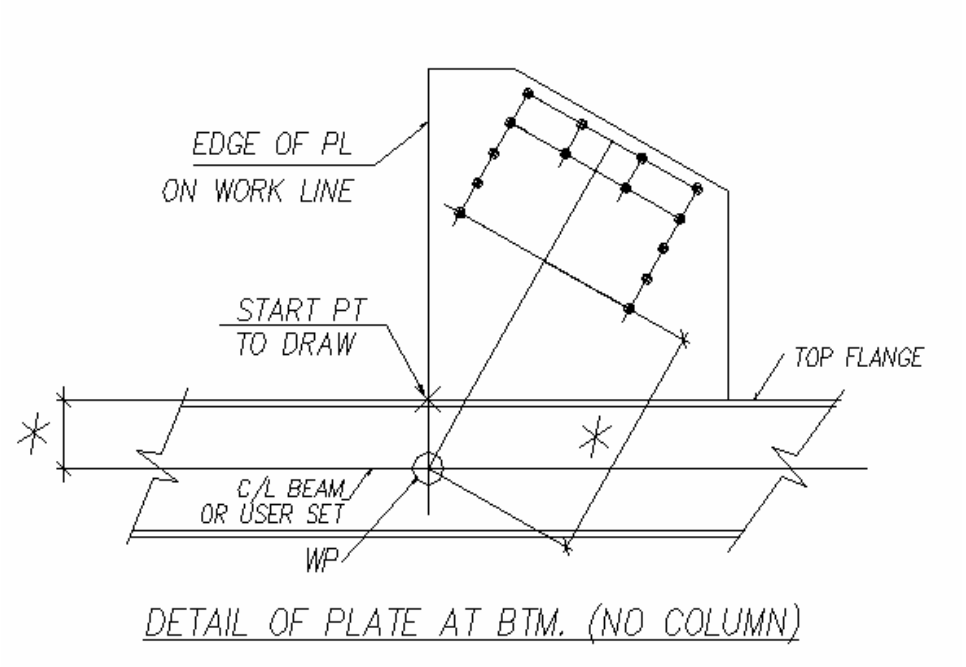
SSDCP Manual

Plate Detail Bottom



SSDCP Manual

Plate Detail Bottom (No Column)



SSDCP Manual

Plate Detail Top (at Column)

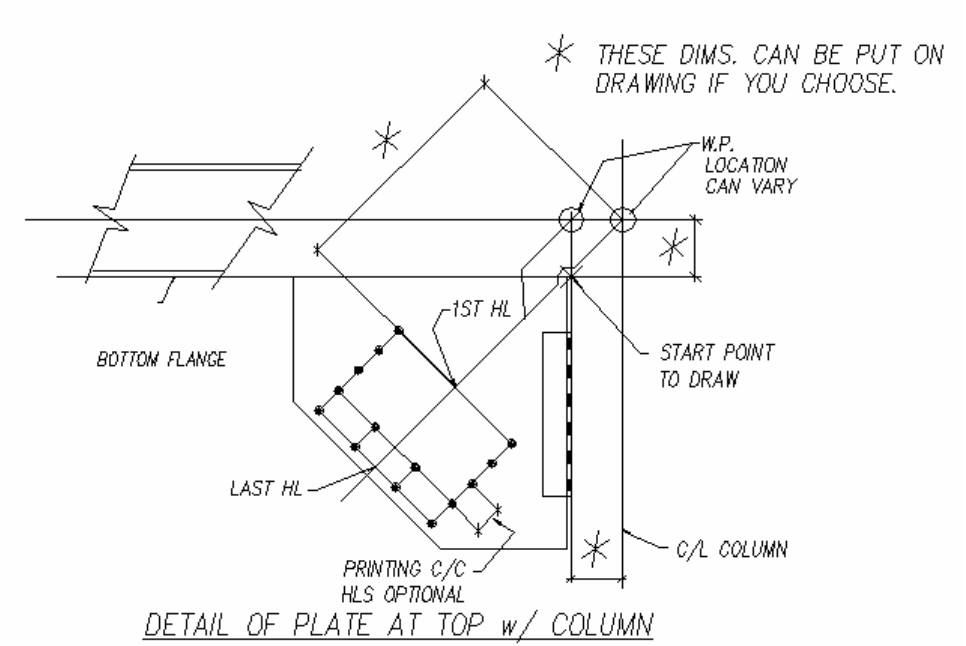
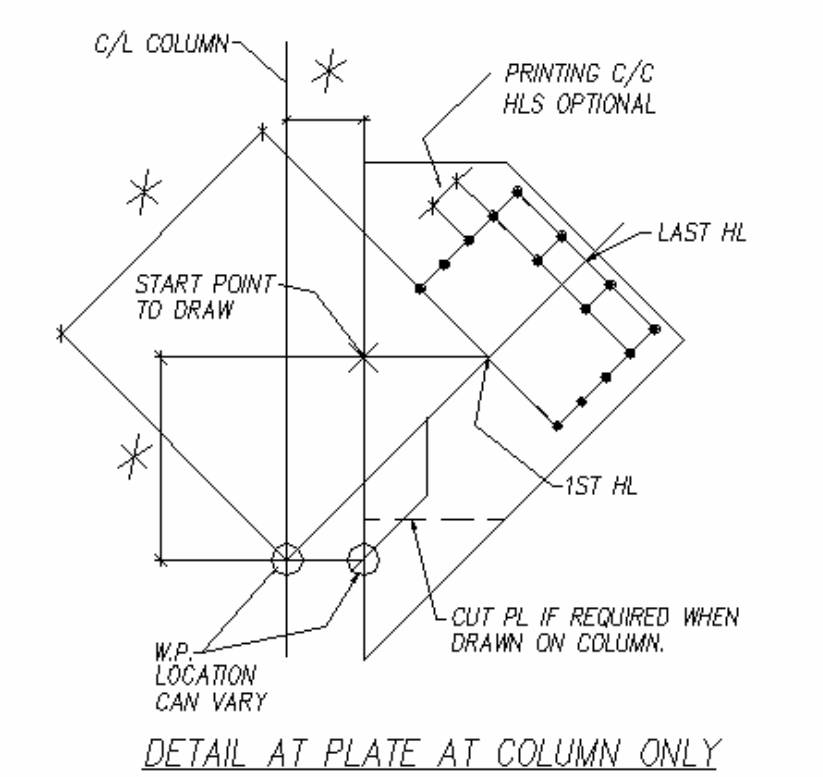
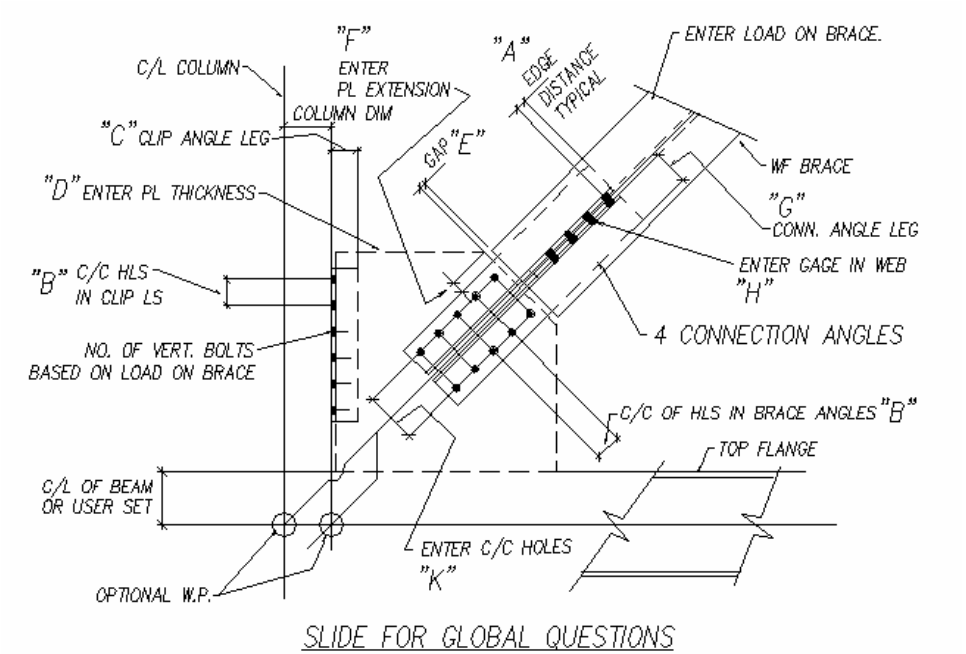

THESE DIMS. CAN BE PUT ON DRAWING IF YOU CHOOSE.
W.P. LOCATION CAN VARY
1ST HL
BOTTOM FLANGE
START POINT TO DRAW
LAST HL
C/L COLUMN
PRINTING C/C HLS OPTIONAL
DETAIL OF PLATE AT TOP w/ COLUMN

Plate Detail (Column Only)



SSDCP Manual

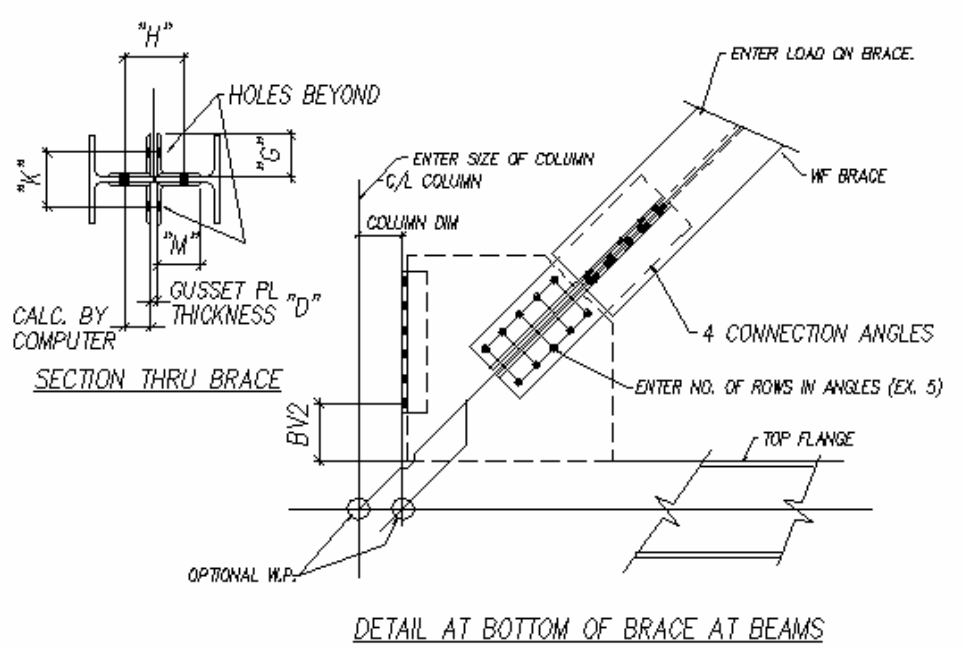
Web Only Bolted
Global Questions



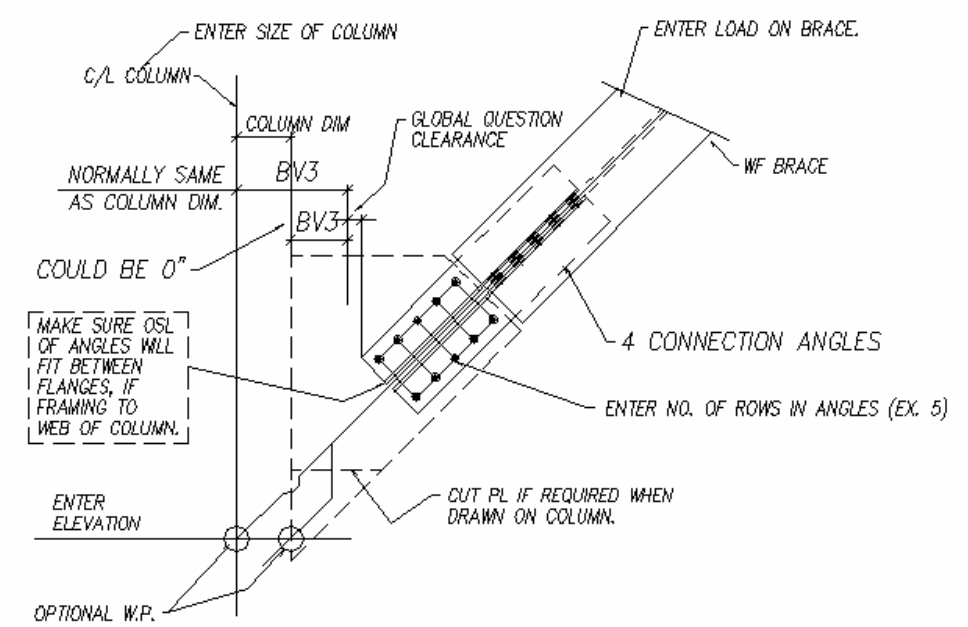
SLIDE FOR GLOBAL QUESTIONS

SSDCP Manual

Bottom of Brace at Beams

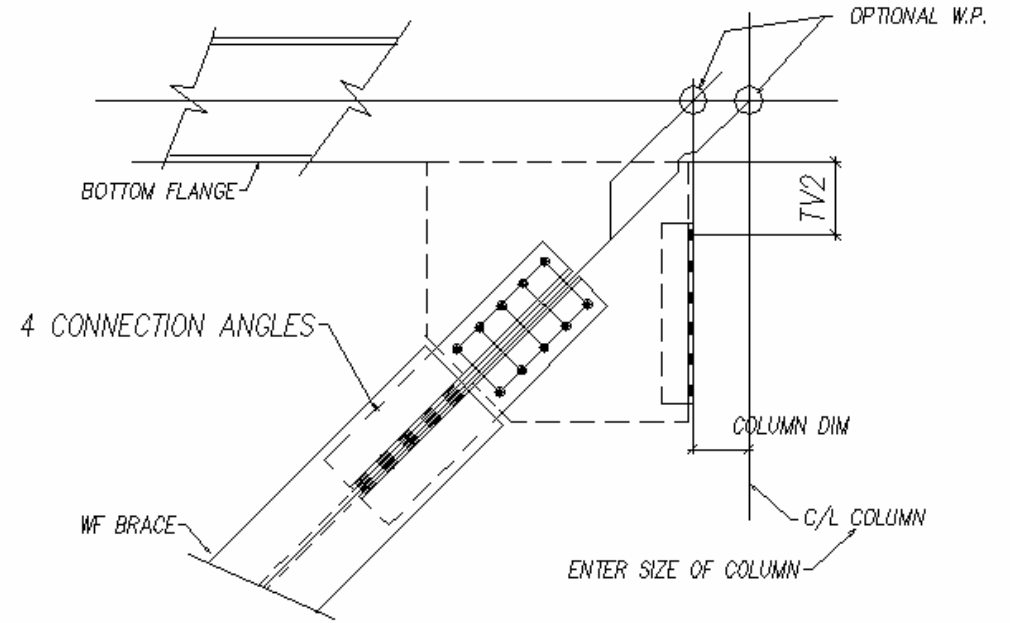


Bottom of Brace (Column Only)


ENTER SIZE OF COLUMN
C/L COLUMN
COLUMN DIM
GLOBAL QUESTION CLEARANCE
ENTER LOAD ON BRACE.
WF BRACE
NORMALLY SAME AS COLUMN DIM.
BV3
BV3
COULD BE 0"
MAKE SURE OSL OF ANGLES WILL FIT BETWEEN FLANGES, IF FRAMING TO WEB OF COLUMN.
4 CONNECTION ANGLES
ENTER NO. OF ROWS IN ANGLES (EX. 5)
ENTER ELEVATION
CUT PL IF REQUIRED WHEN DRAWN ON COLUMN.
OPTIONAL W.P.

DETAIL AT BOTTOM OF BRACE AT COLUMN ONLY

Top of Brace



DETAIL AT TOP OF BRACE

SSDCP Manual

Plate Detail at Top

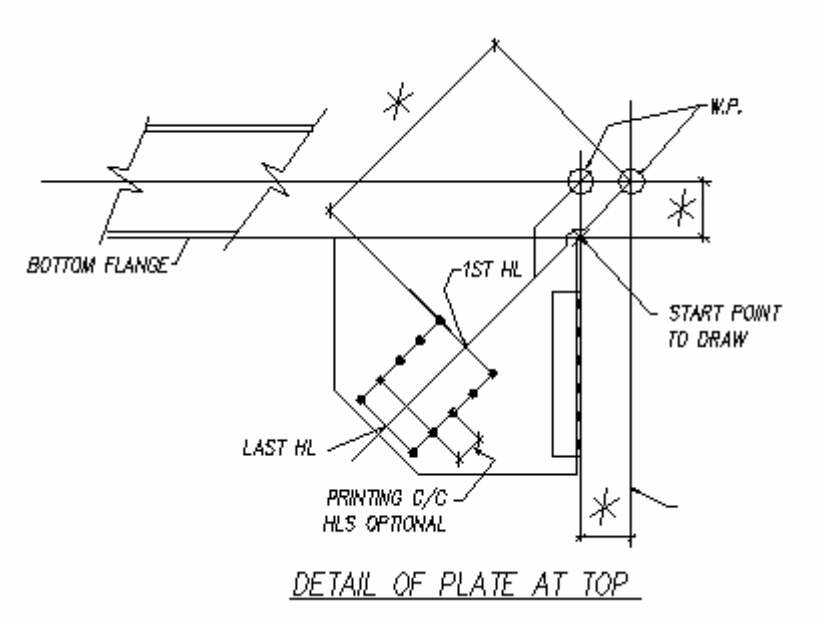


Plate Detail at Bottom

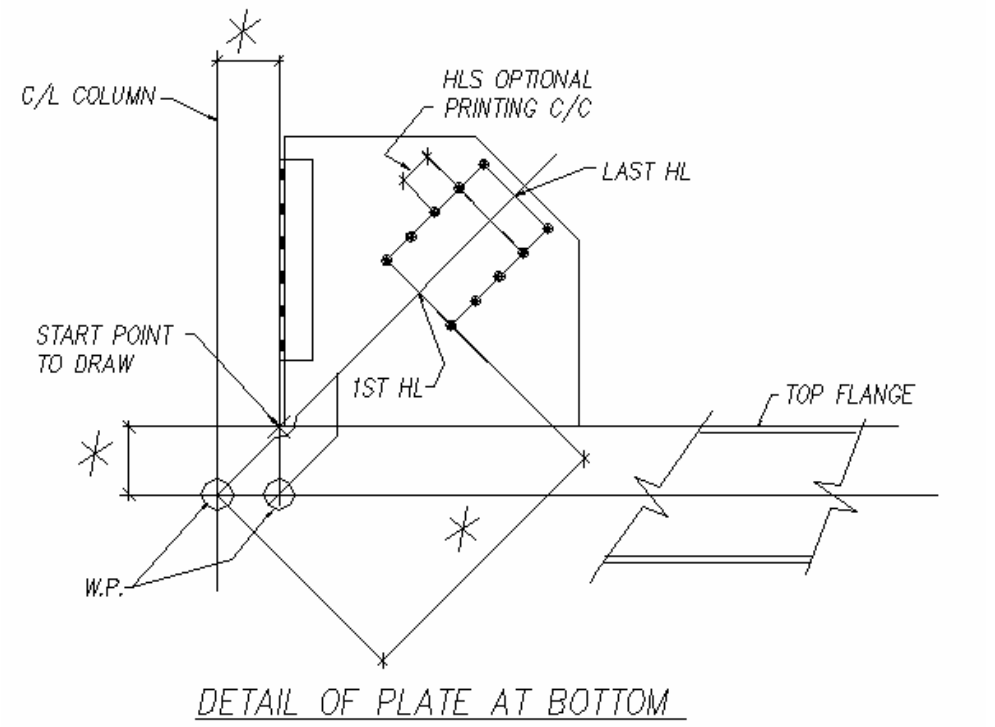
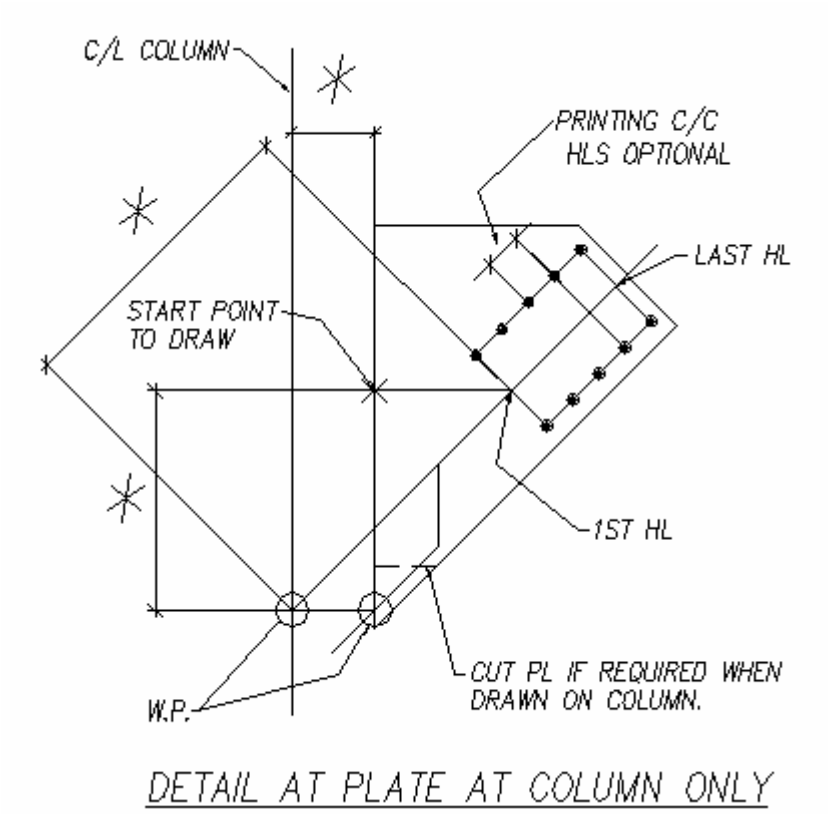


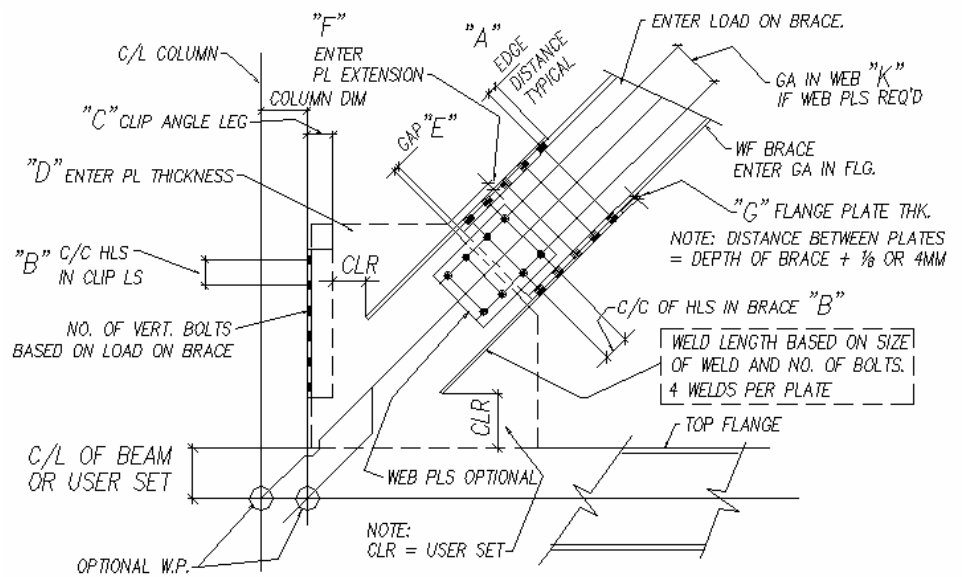
Plate Detail (Column Only)



DETAIL AT PLATE AT COLUMN ONLY

SSDCP Manual

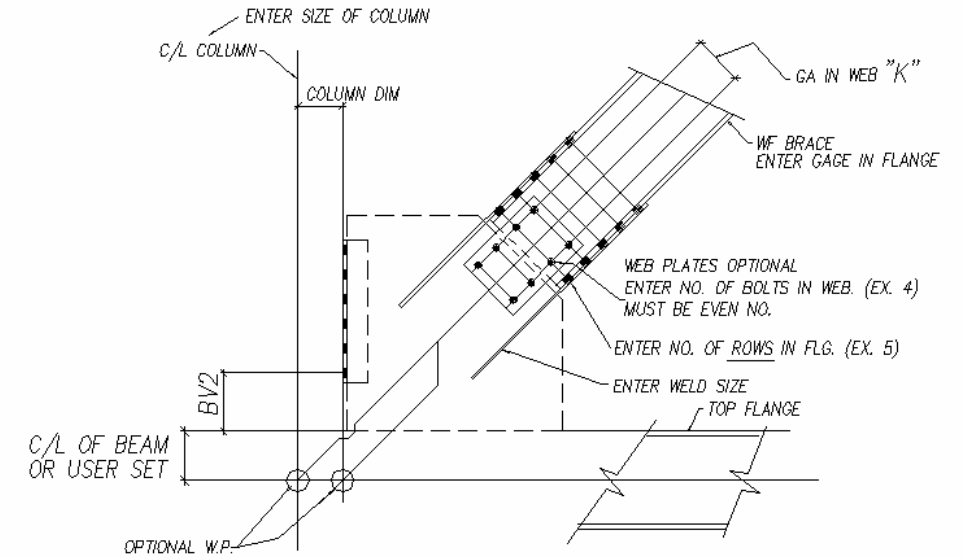
Flange and Web Bolted (Flange Plates)
Global Questions



SLIDE FOR GLOBAL QUESTIONS

SSDCP Manual

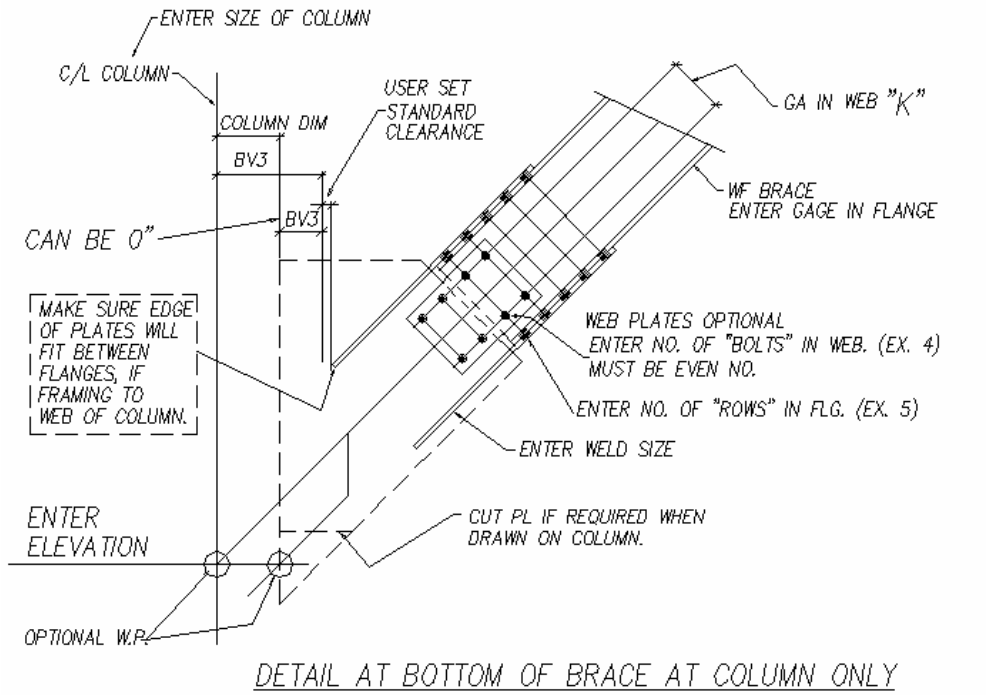
Bottom of Brace at Beams



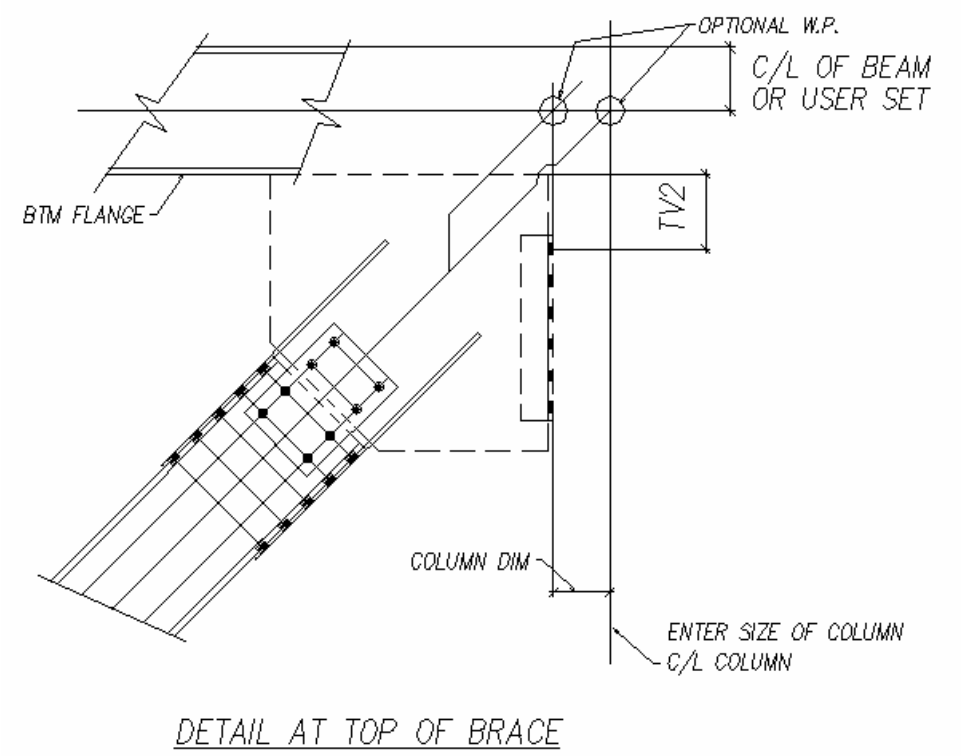
DETAIL AT BOTTOM OF BRACE AT BEAMS

SSDCP Manual

Bottom of Brace (Column Only)



Top of Brace


OPTIONAL W.P.
C/L OF BEAM
OR USER SET
BTM FLANGE
TV2
COLUMN DIM
ENTER SIZE OF COLUMN
C/L COLUMN
DETAIL AT TOP OF BRACE

SSDCP Manual

Plate Detail at Top

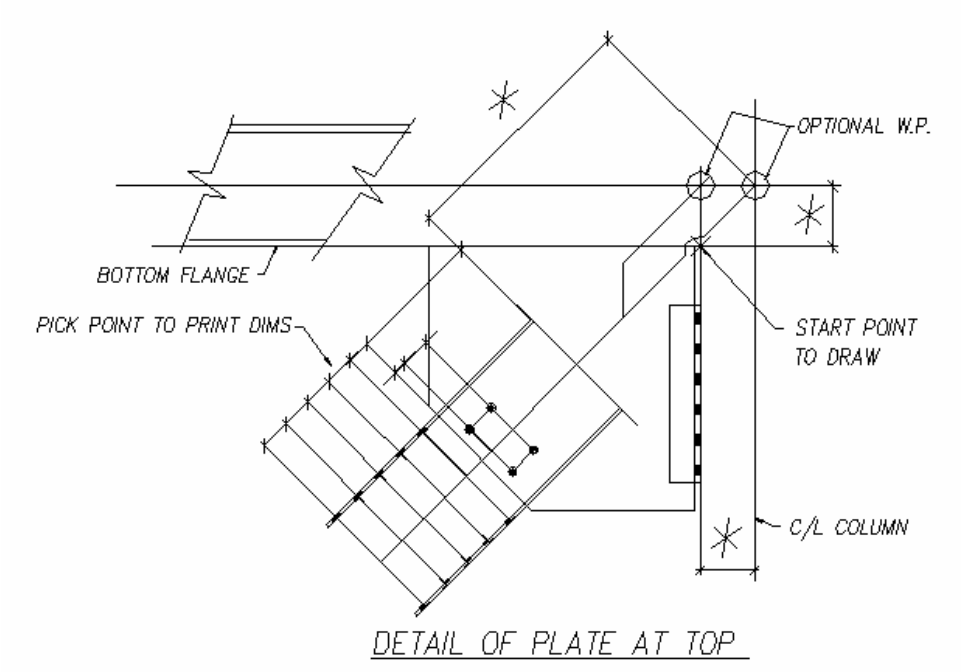


Plate Detail at Bottom

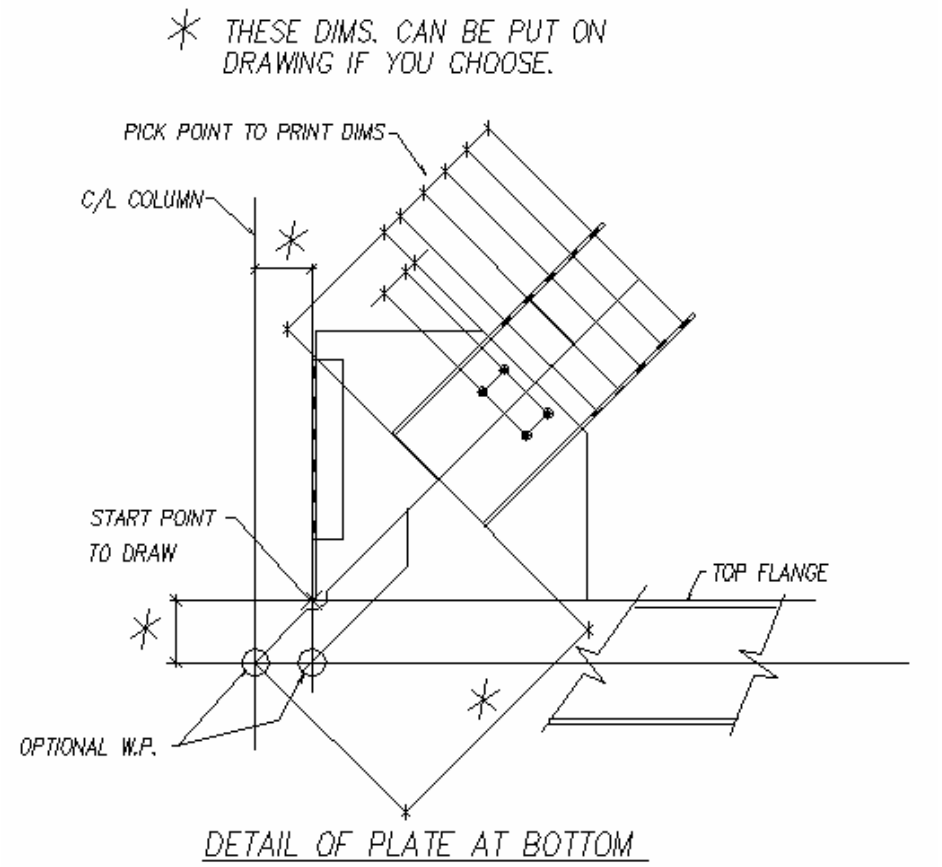
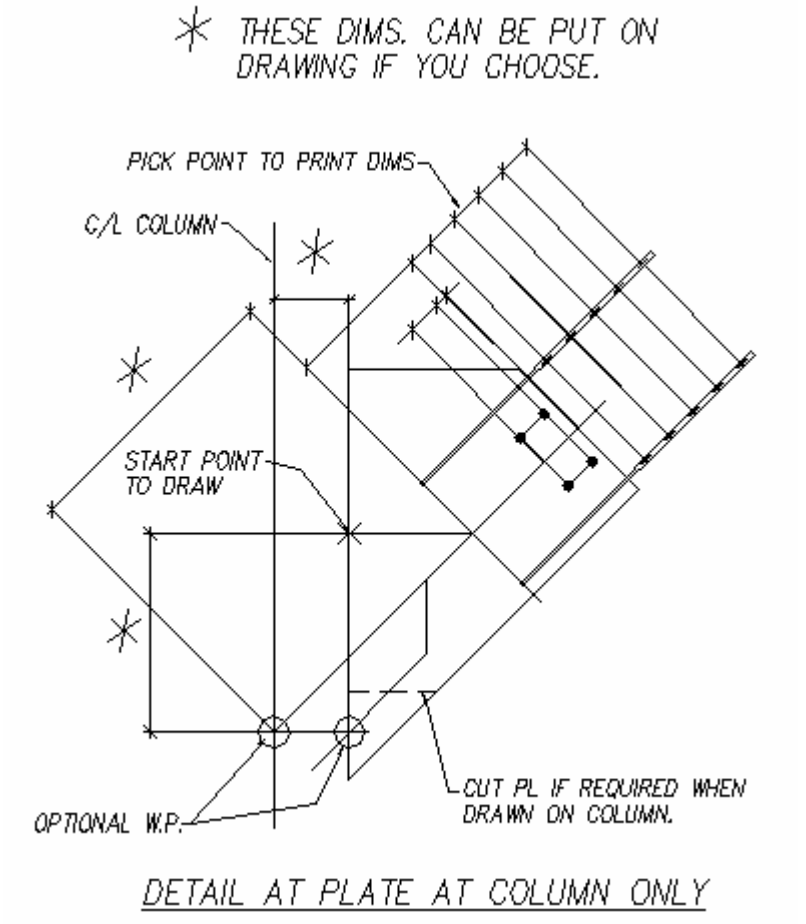
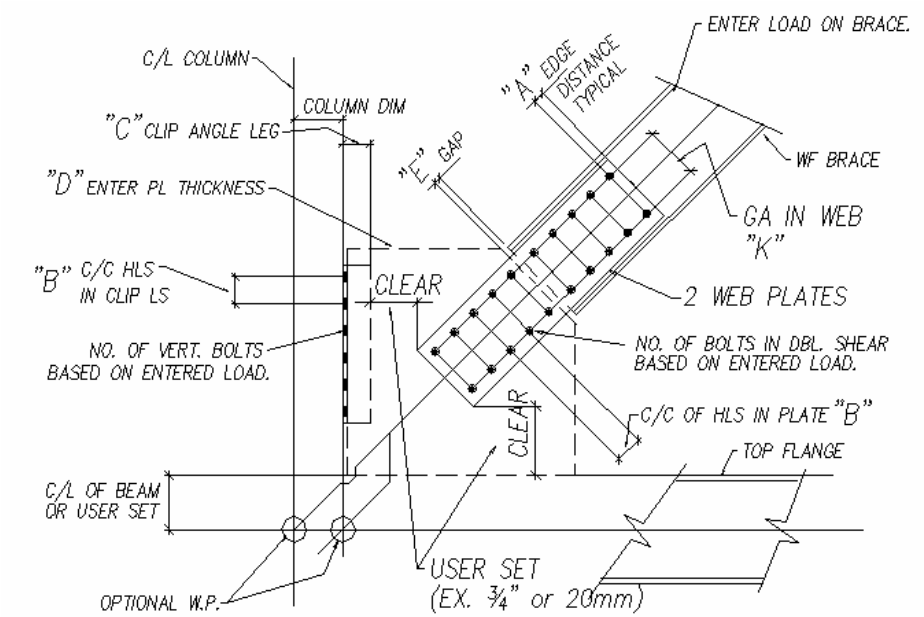

* THESE DIMS. CAN BE PUT ON DRAWING IF YOU CHOOSE.
PICK POINT TO PRINT DIMS
C/L COLUMN
START POINT TO DRAW
TOP FLANGE
OPTIONAL W.P.
DETAIL OF PLATE AT BOTTOM

Plate Detail (Column Only)


* THESE DIMS. CAN BE PUT ON DRAWING IF YOU CHOOSE.
PICK POINT TO PRINT DIMS
C/L COLUMN
START POINT TO DRAW
OPTIONAL W.P.
CUT PL IF REQUIRED WHEN DRAWN ON COLUMN.
DETAIL AT PLATE AT COLUMN ONLY

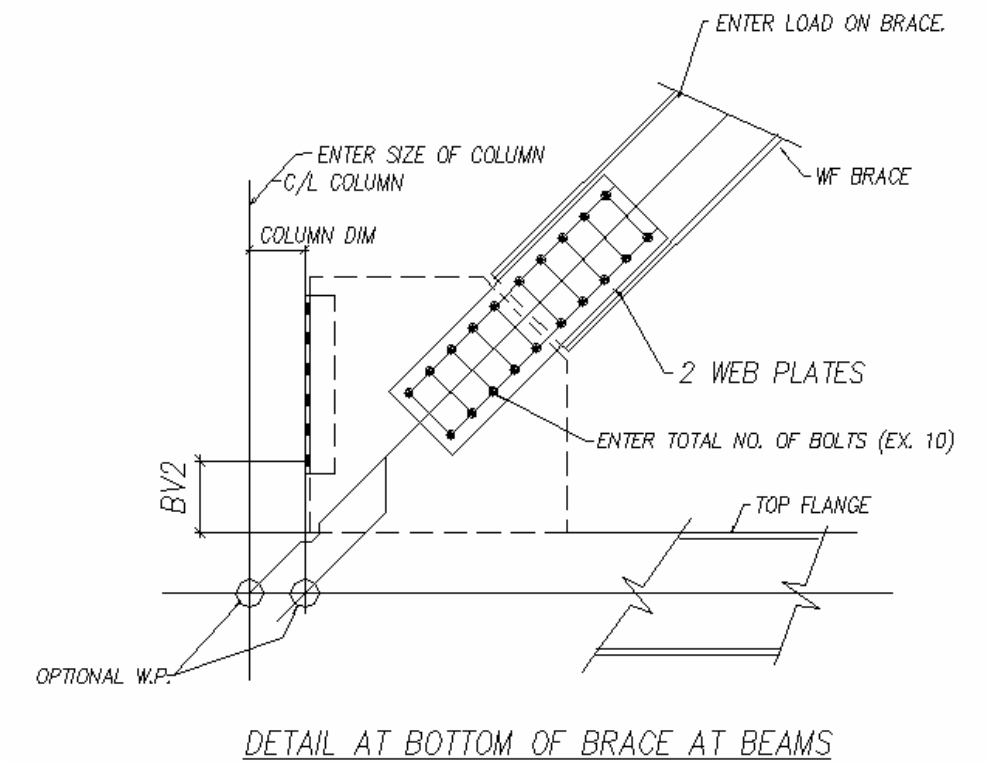
SSDCP Manual

Web Only Bolted (Plates)
Global Questions



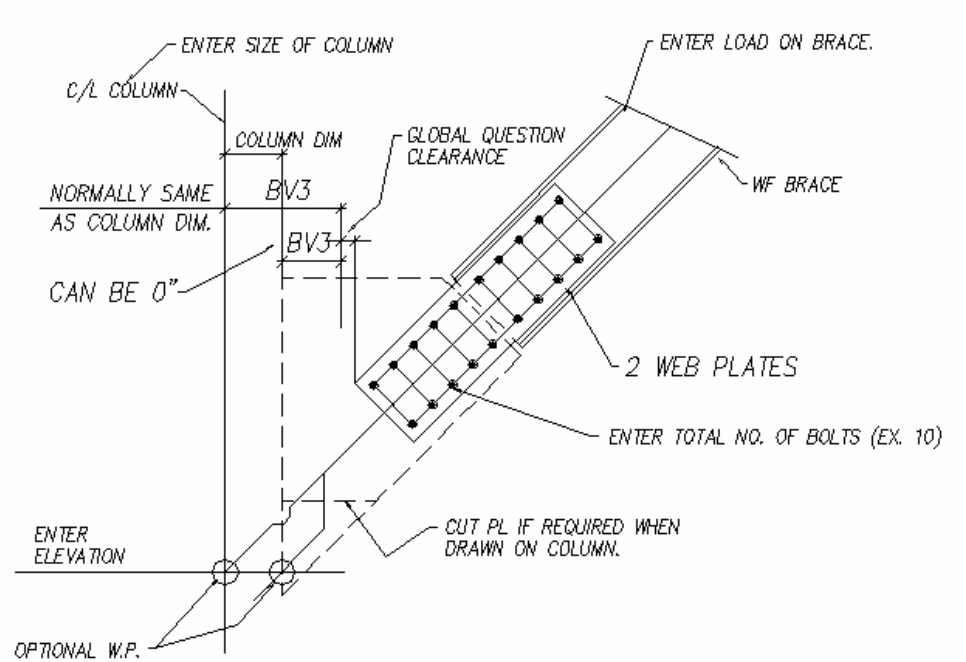
SLIDE FOR GLOBAL QUESTIONS

Bottom of Brace at Beams



SSDCP Manual

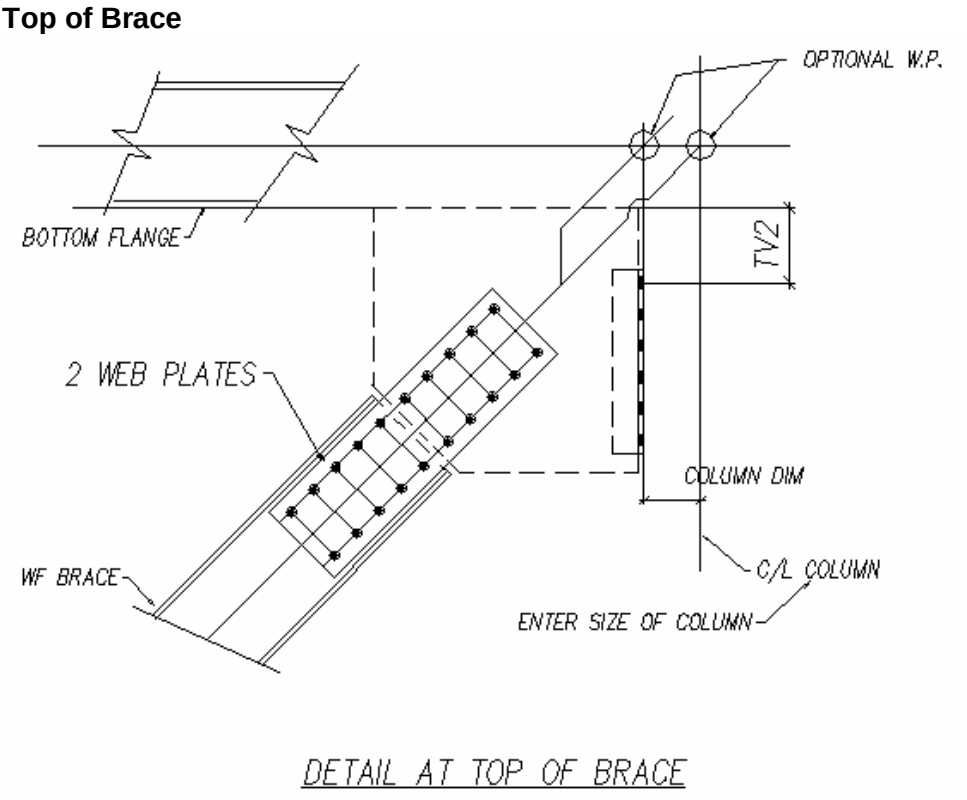
Bottom of Brace (Column Only)



DETAIL AT BOTTOM OF BRACE AT COLUMN ONLY

SSDCP Manual

Top of Brace



DETAIL AT TOP OF BRACE

Plate Detail at Top

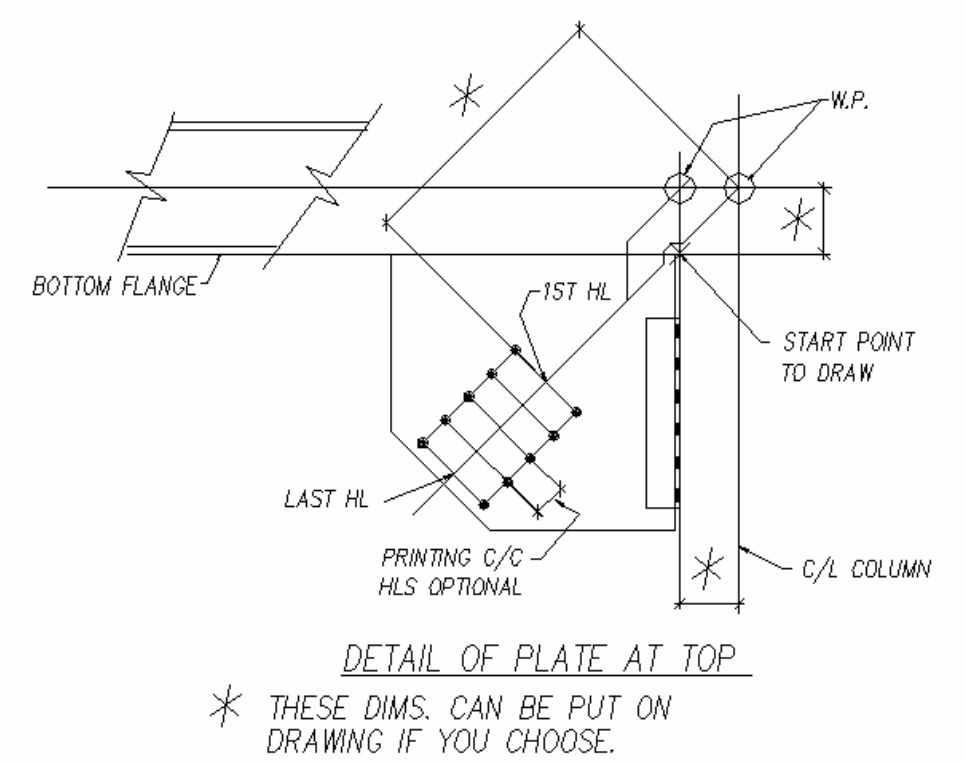


Plate Detail at Bottom

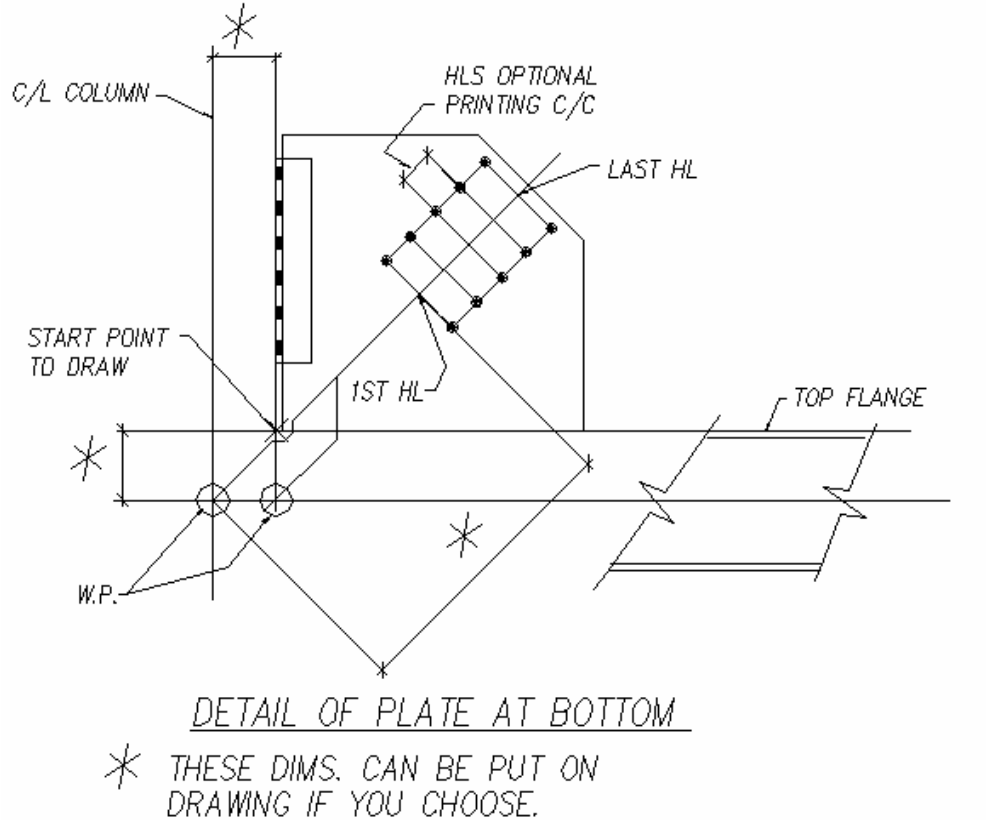
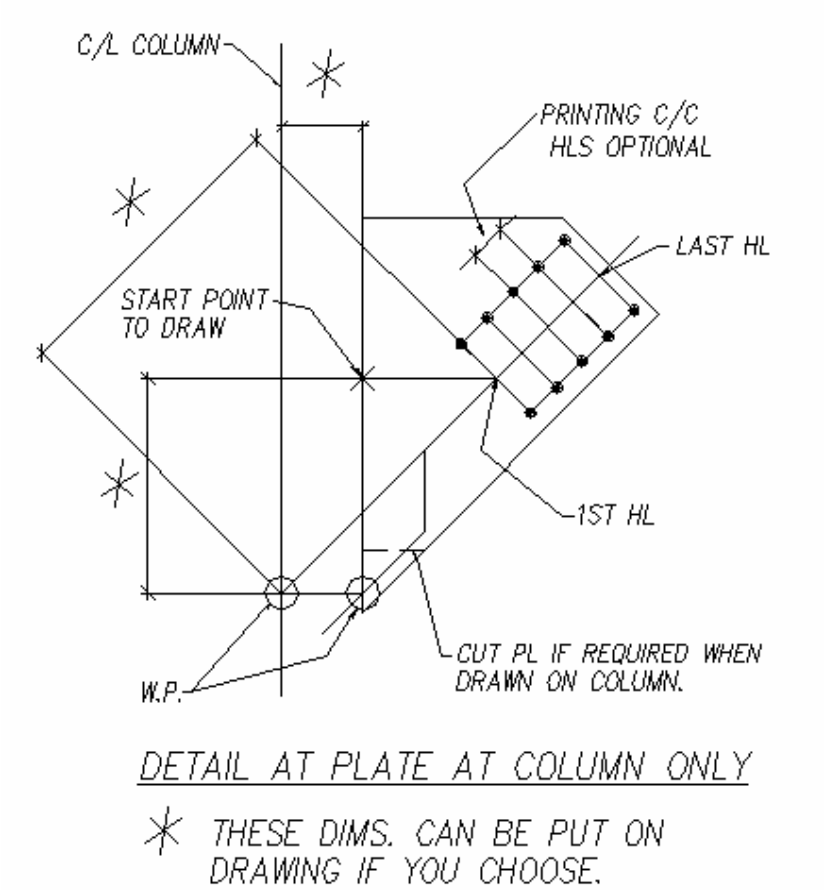


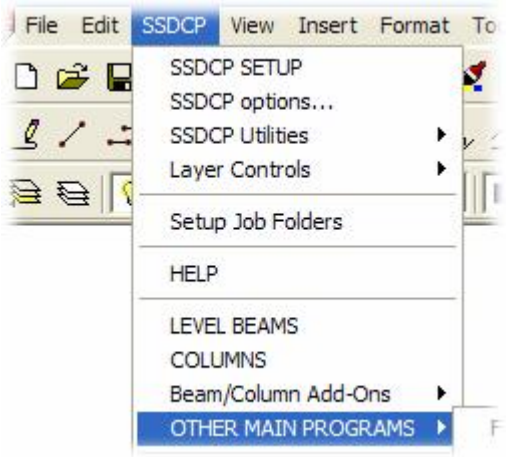
Plate Detail (Column Only)

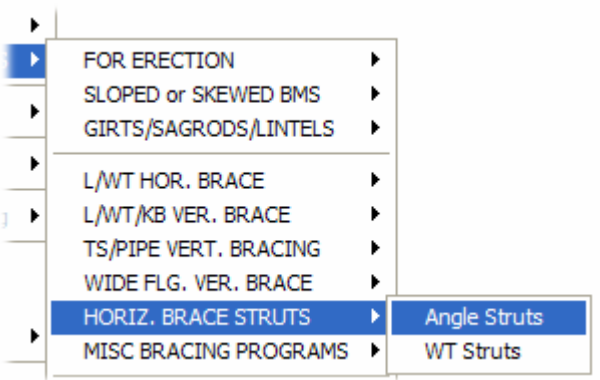


SSDCP Manual

Horizontal Brace Struts

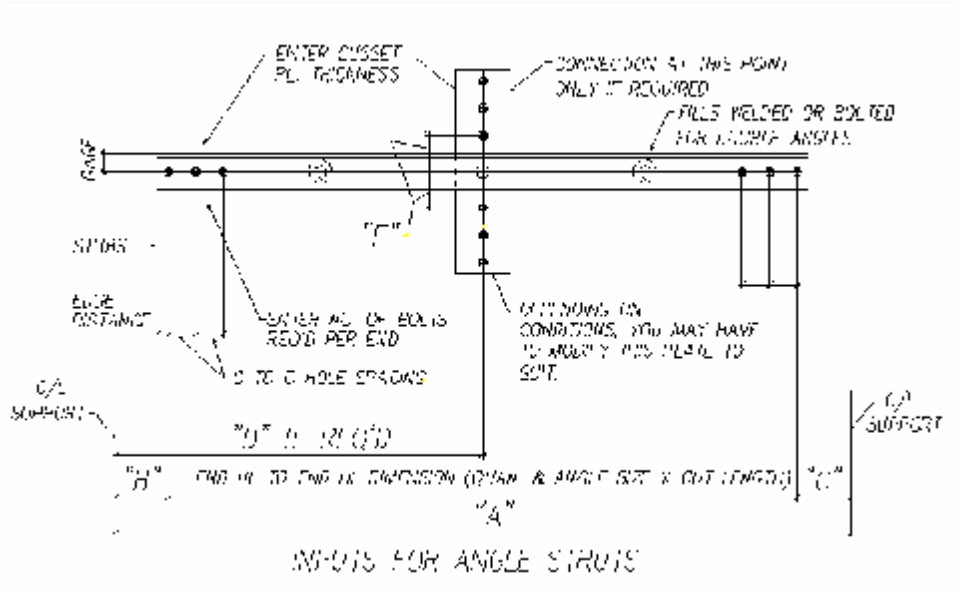
Angles Struts





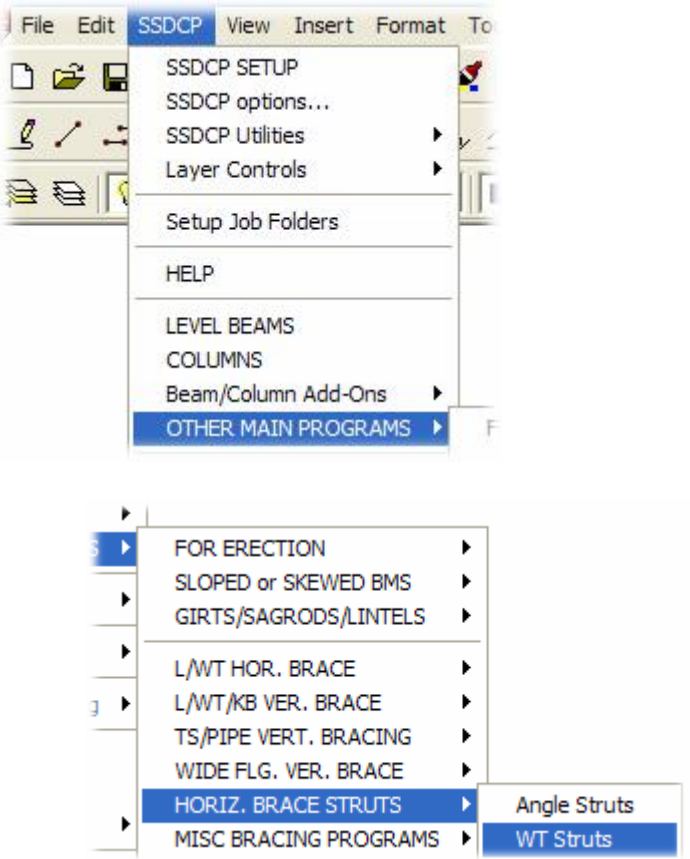
Routine to detail angle struts and can be single angle or double angle. Midpoint connection is optional.

SSDCP Manual



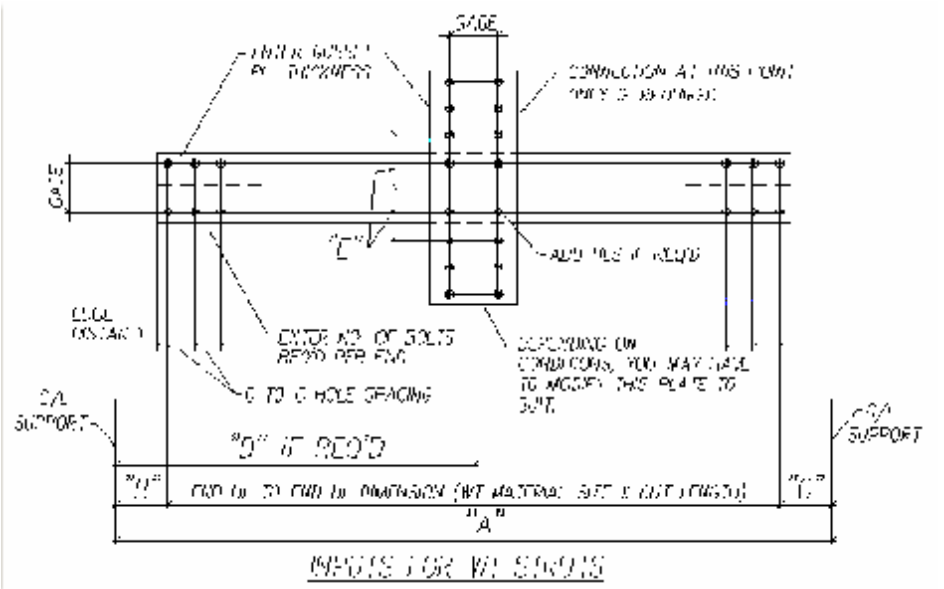
SSDCP Manual

WT Struts



Routine to detail WT struts. Midpoint connection is optional.

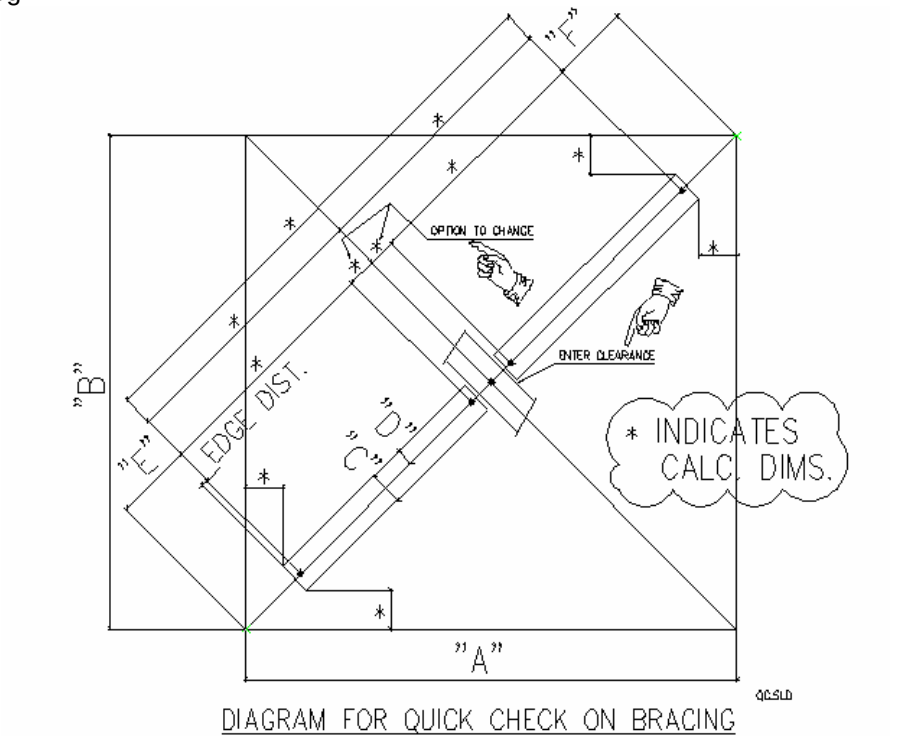
SSDCP Manual



Miscellaneous Bracing Programs

Quick Check

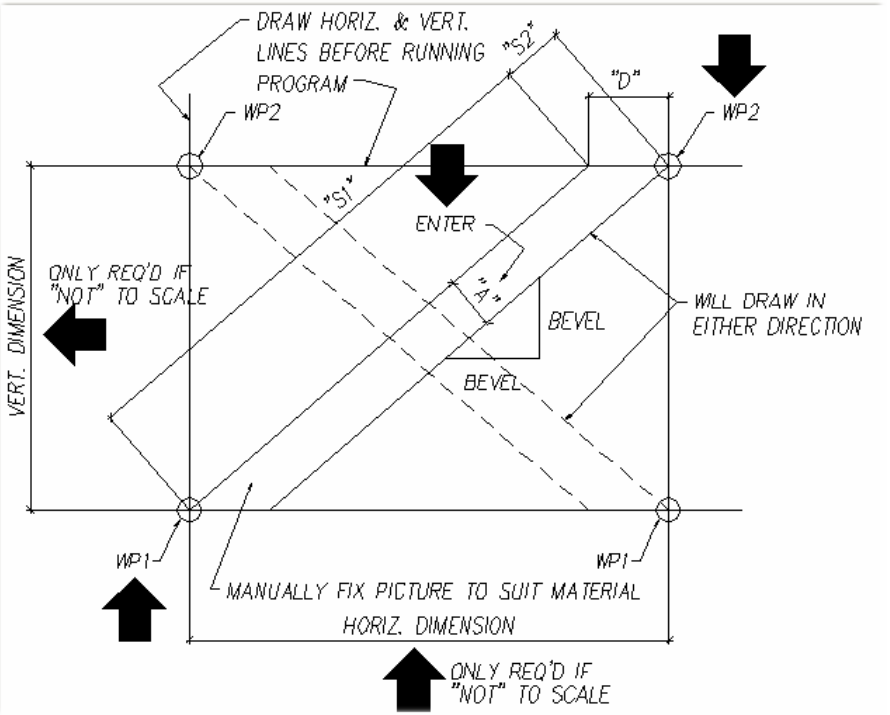
A routine to allow for quick checking of bracing angles by inputting values as needed by the dialog.



Odd Bracing Angle

A routine to aid in calculating odd bracing angles. Dimensions are calculated by placing work points to scale.

SSDCP Manual



Generic Brace Plates

This program will draw "GENERIC" bracing plates. This program DOES NOT read any files for input. The user will have to input ALL dimensions and bevels when asked by the program. This is draw bracing plates for single or double gages.

SSDCP Manual



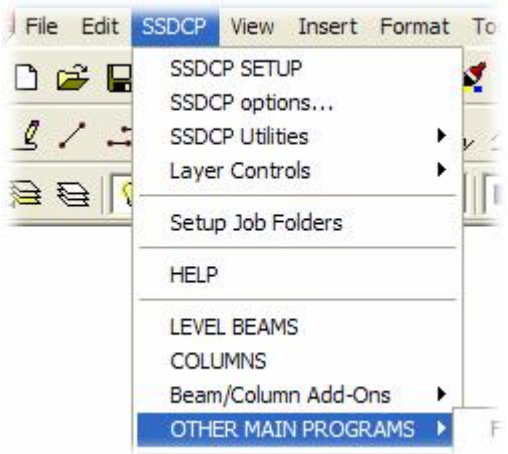
SSDCP Manual

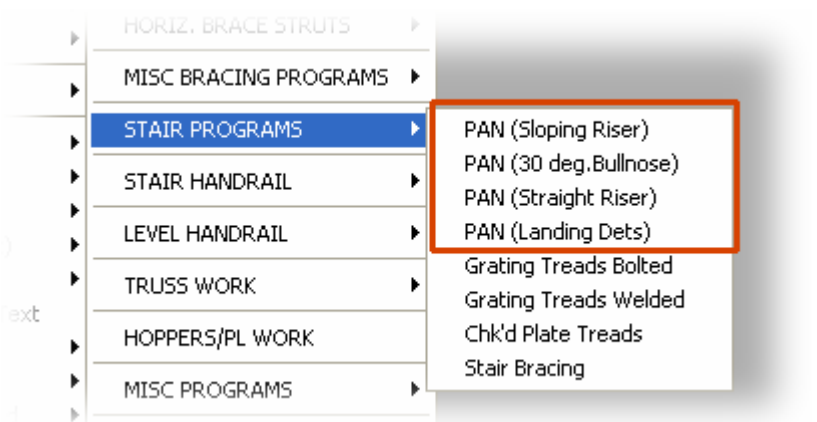
Pan Stairs

DESCRIPTION

This program draws pan stairs. It gives all dimensions to fabricate the stringers, all dims for bending the pans, and draws a plan and elevation of the stairs. It will draw handrail holes in the top flange of channels if required.

COMMAND





SSDCP Manual

There are two different pan stair programs called "Sloping riser" and "30 deg bull nose". These are the only two types of pans that are approved by the American Disability Act of 1990. Any of the programs will draw sanitary coves if they are required.

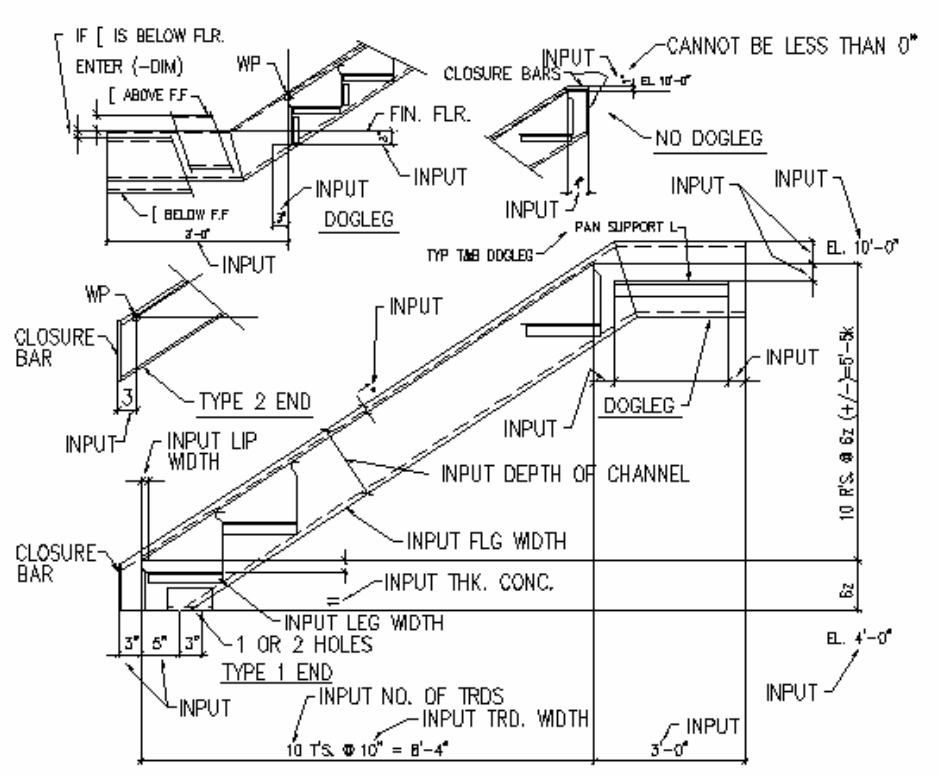
If you have a landing, you can use the "Landing Dets" program to draw the landing pan, header channel, and rear wall channel details when you get thru with the stair.

DRAWING SCALE: 1"=1' or MM equivalent

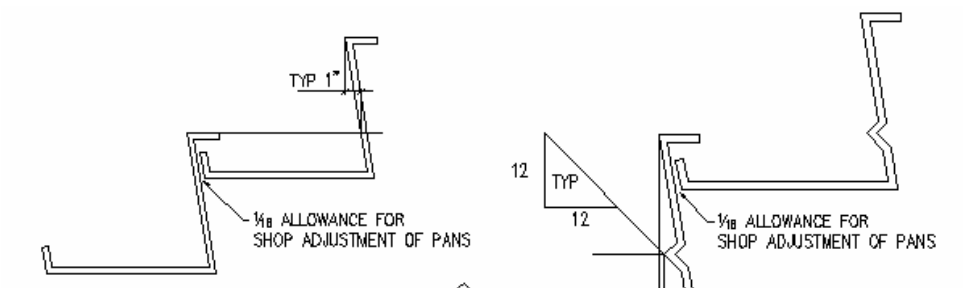
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.

SSDCP Manual

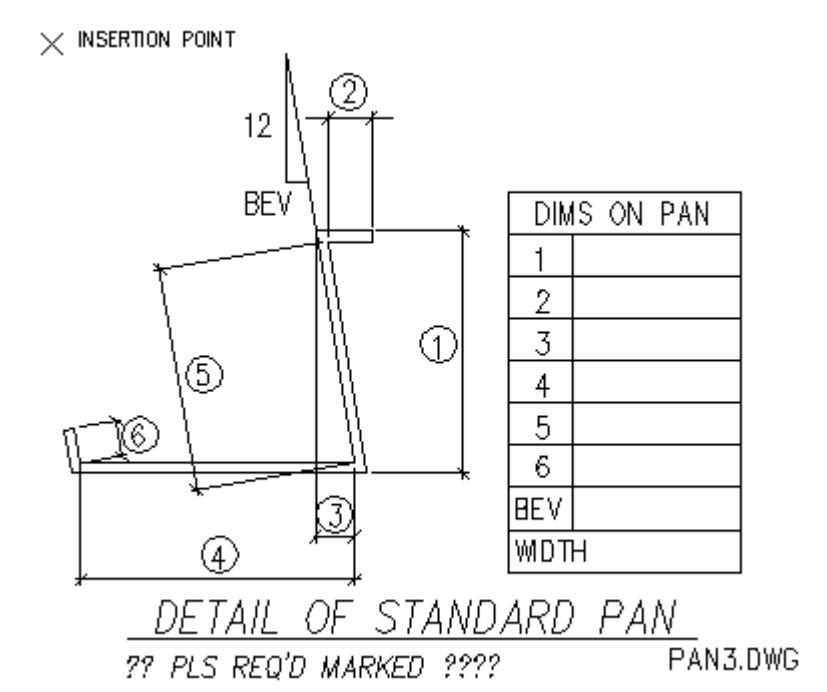
Typical Stair Input



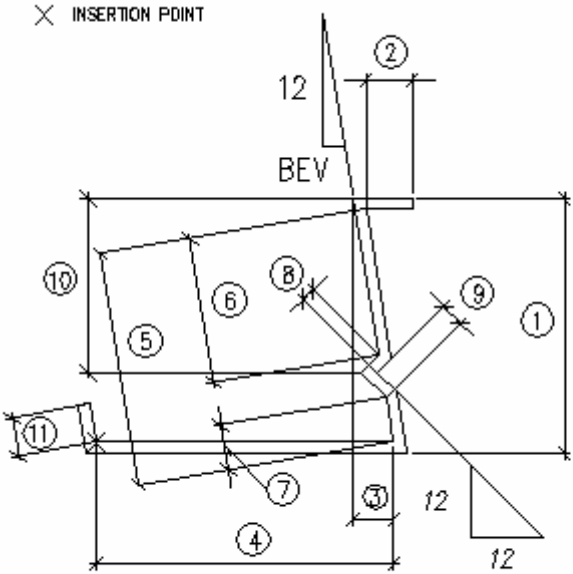
Standard and Sanitary Cove Pans



Standard Pan Details



SSDCP Manual



DIMS ON PAN	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
BEV	
WIDTH	

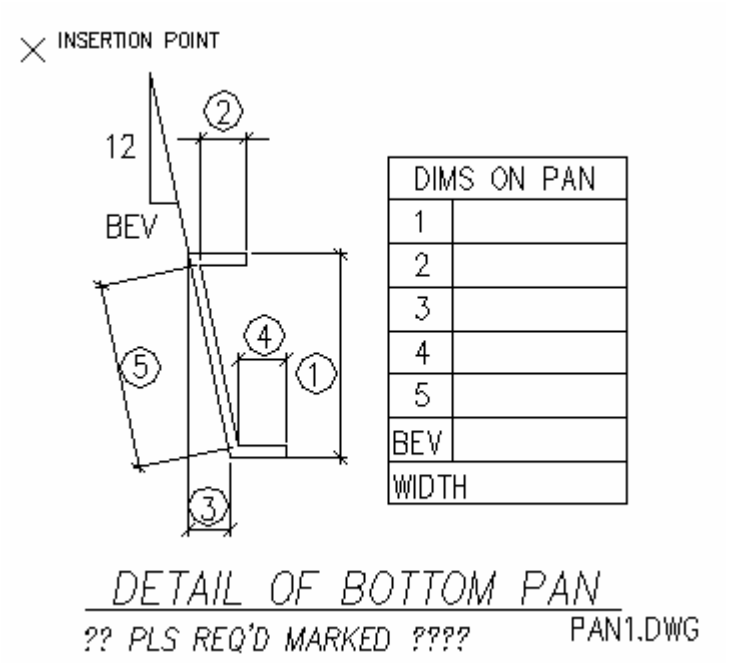
DETAIL OF STANDARD PAN

?? PLS REQ'D MARKED ????

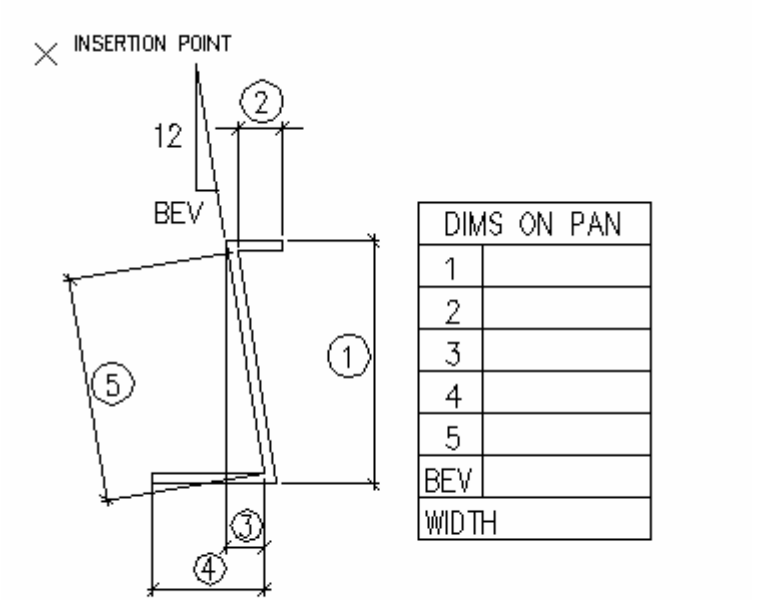
PANSC3.DWG

SSDCP Manual

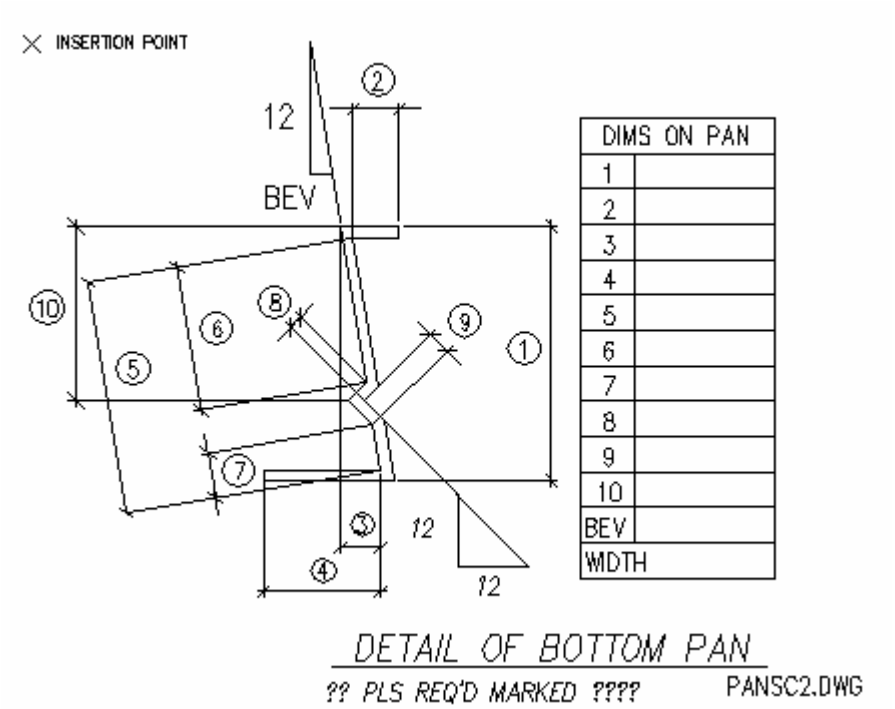
Bottom Pan Details



SSDCP Manual

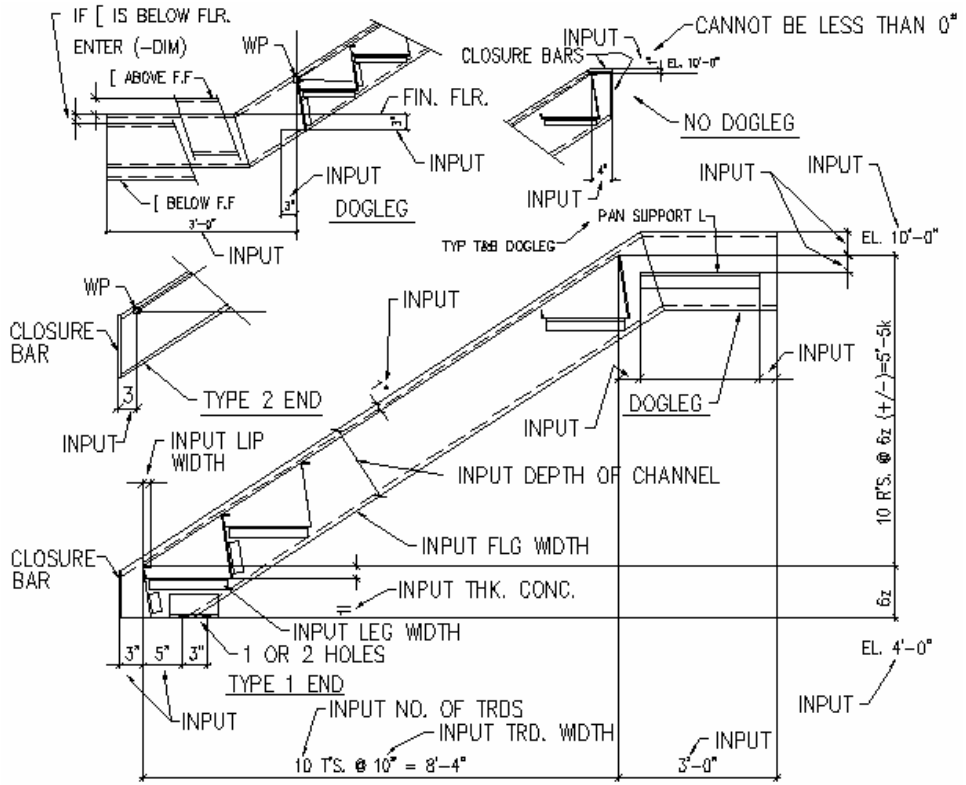


SSDCP Manual



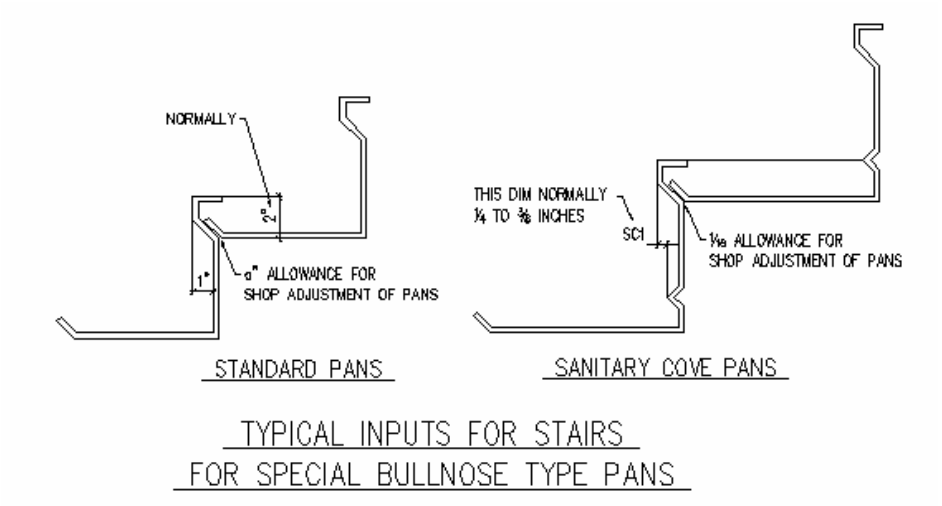
SSDCP Manual

Stair Inputs for Bullnose Pans



SSDCP Manual

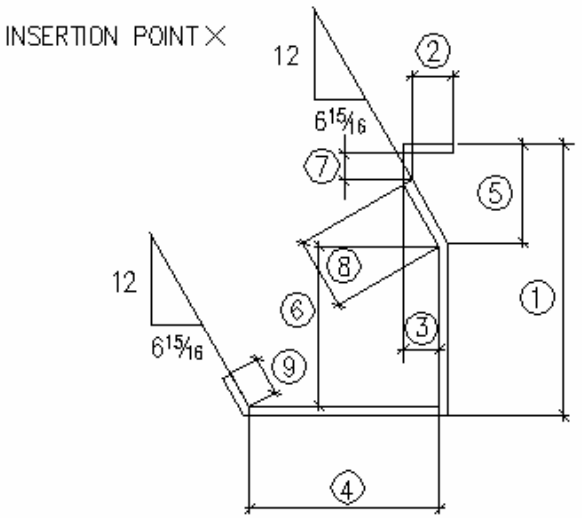
Bullnose Type Pans



TYPICAL INPUTS FOR STAIRS
FOR SPECIAL BULLNOSE TYPE PANS

SSDCP Manual

Standard Bullnose Pans



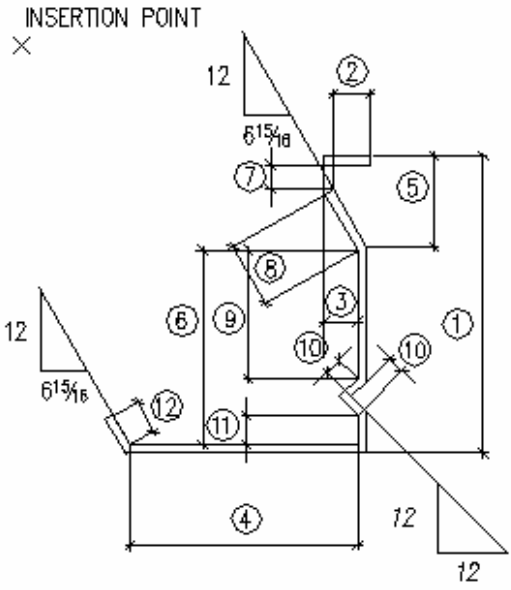
DIMS ON PAN	
1	
2	
3	
4	
5	
6	
7	
8	
9	
WIDTH	

DETAIL OF STANDARD PAN

?? PLS REQ'D MARKED ????

PAN3D.DWG

SSDCP Manual



DIMS ON PAN	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
WIDTH	

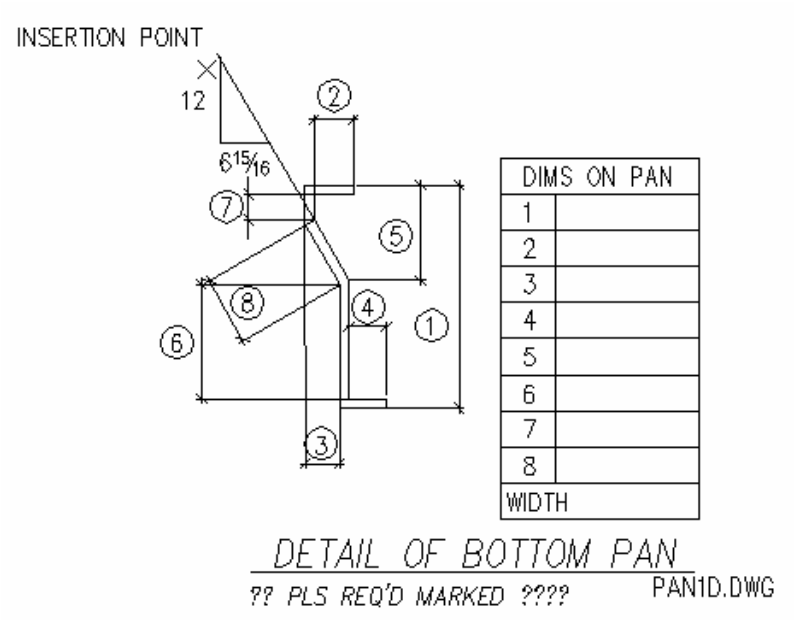
DETAIL OF STANDARD PAN

?? PLS REQ'D MARKED ????

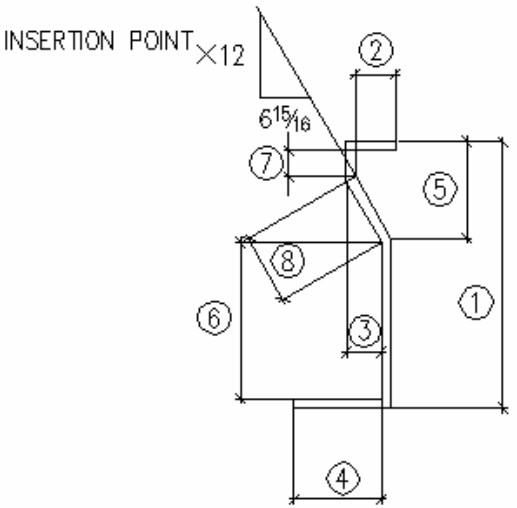
PANSC3D.DWG

SSDCP Manual

Bullnose Bottom Pan Details



SSDCP Manual

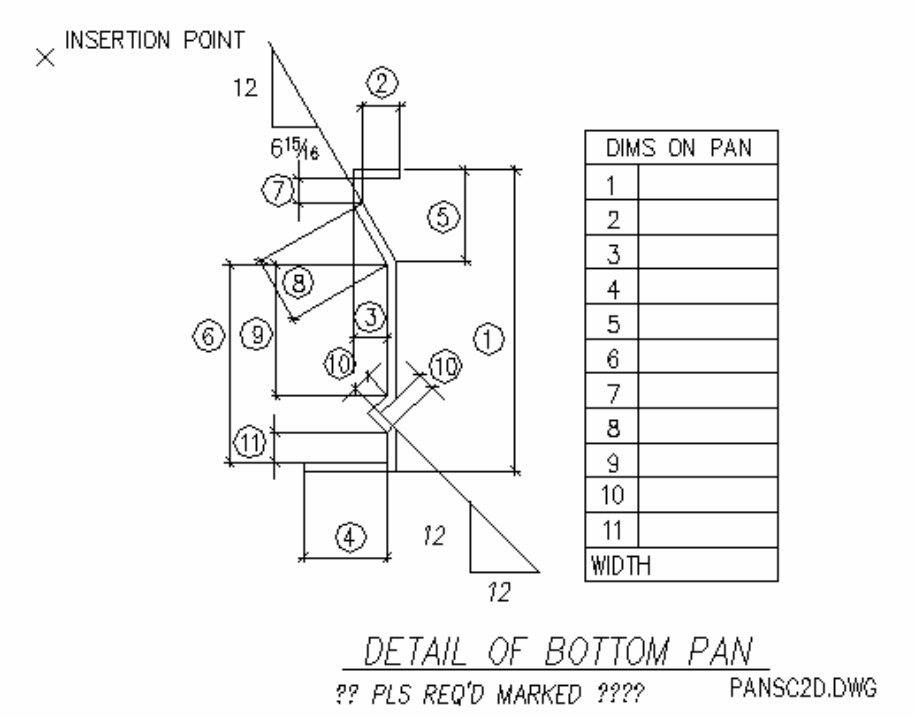


DIMS ON PAN	
1	
2	
3	
4	
5	
6	
7	
8	
WIDTH	

DETAIL OF BOTTOM PAN

?? PLS REQ'D MARKED ????

PAN2D.DWG



DIMS ON PAN	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
WIDTH	

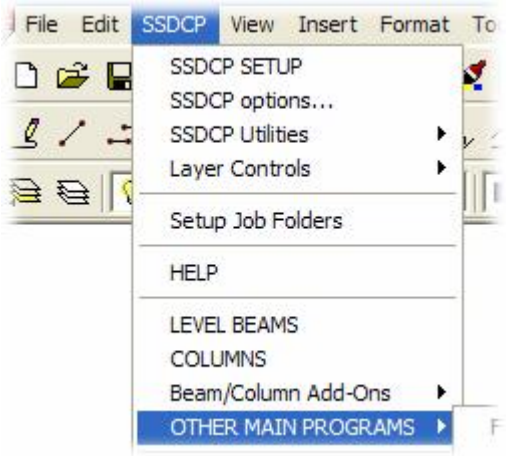
Grating Treads Bolted
Grating Treads Welded

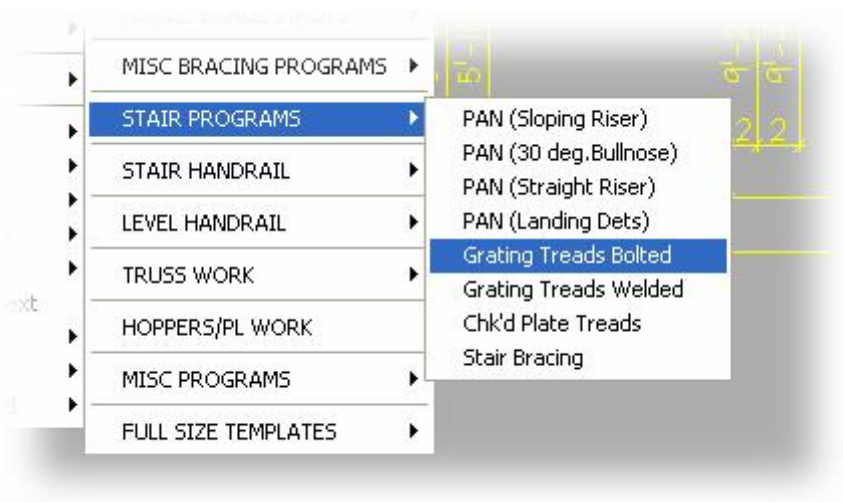
DESCRIPTION

This program draws & dimensions bolted grating tread stairs. It will give a stub dim table to every 7/16" holes for the treads. This program will draw either standard stairs or ship's ladders and will draw handrail holes in top flange, if required.

SSDCP Manual

COMMAND





It is not possible to cover all the different ways the stairs are connected at the top and bottom ends. The most common ways have been chosen. After you get acquainted with running the programs, you will find there are ways you can "fool" the program to get what you want. If a stringer needs to be blocked out for framing purposes you may use the misc. program called "add notch or block" for this.

insertion point is the first 7/16 hole in the tread. If the fabricator wants to ship the two stringers bolted together using the treads, you will have to add a note telling the shop the dimension back to back of the stringers. A plan view is not required, as these stringers will not fit together more than one way with the treads bolted in. This is an opportunity that you could use the above mentioned blocks to make your stringers look bolted together. After program is complete, use the icon menu to select and insert these. There is also a block on a full tread if you need to show a detail.

You have the option to draw the sloping length to scale if you wish. If you do not want to draw the sloping length to scale, the stair will be drawn 6" long, real world dimension unless the slope is less than 6'. Then the stair will be drawn to scale. All other areas are drawn to scale (i.e. angle of stair and top and bottom of stair).

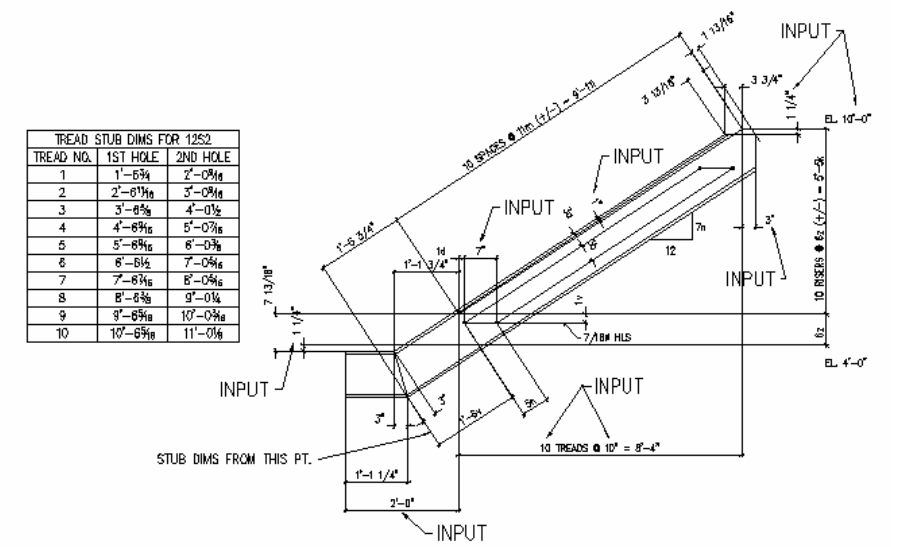
IMPORTANT NOTE:
The stub dims are going to be figured to the absolute end of the sloping stringer (starting at bottom). You need to be careful when you enter the figure numbers and the dims when the bottom of the stair is not doglegged. This will affect the stub dims for the tread holes. You must enter the horizontal and vertical dims so the absolute end of the channel will be at the place where the stub dims will be true. You can modify the picture after the stringer has been drawn.

DRAWING SCALE: STAIRS MUST BE DRAWN AT 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.

SSDCP Manual

Stair with Grating Treads Example



Checkered Plate Treads

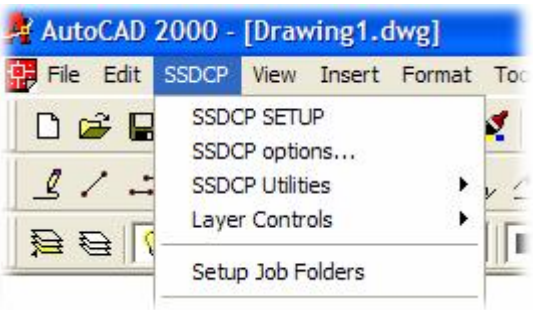
DESCRIPTION:

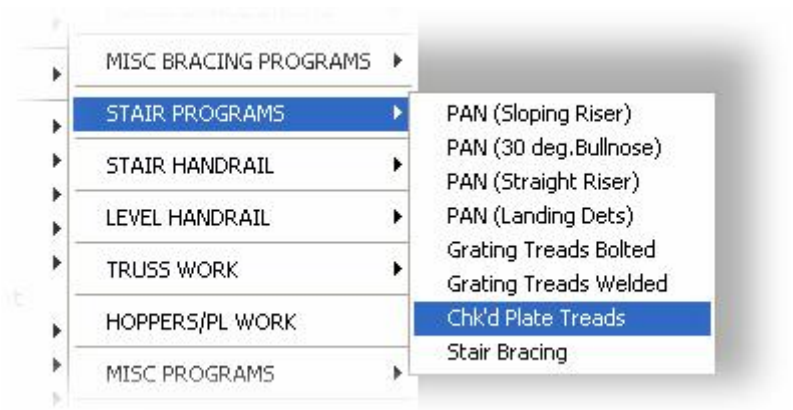
This program draws checkered plate tread stairs and gives all dimensions to fabricate the stringers, all dimensions for bending the treads, and draws up to two elevations and a plan view of the stairs.

The only thing that is not drawn to scale is the sloping length of the stair from W.P. to W.P. This is always drawn 6" long real world dim, no matter how big the stair is. If the stair is less than 6'- 0" long, then the stair will be drawn to scale lengthwise. All other areas are drawn to scale (i.e. angle of stair, top and bottom of stair, and the bent plates).

COMMAND

SSDCP Manual





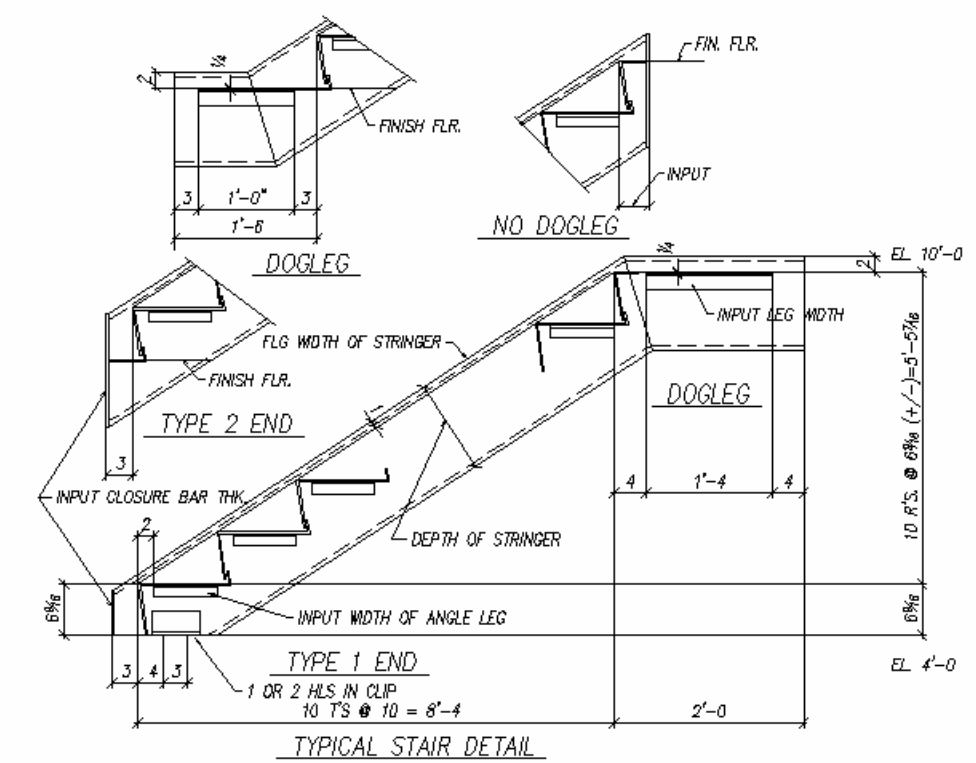
OPTIONS

1. Two different types of bent checkered plate treads with open or closed riser material.
2. Two different ends at bottom of stairs
3. Doglegs can be drawn at top or bottom or at both ends of stairs.
4. Each stringer can have different connections at ends.
5. Choice of support angle for landing pans if required.
6. Draw holes in top flange for handrail posts if required.
7. Draw closure bars at end of stringers if required.
8. Will handle "ship's ladders" if required.

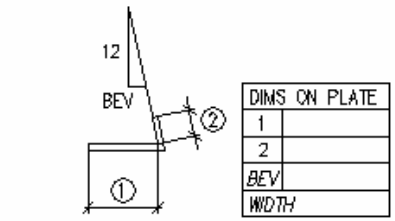
DRAWING SCALE: 1"=1' or MM equivalent

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart

Typical Stair Detail



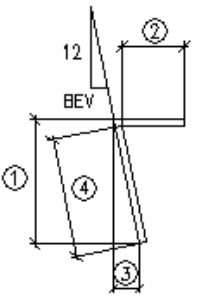
Standard Tread Details



DIMS ON PLATE	
1	
2	
BEV	
WIDTH	

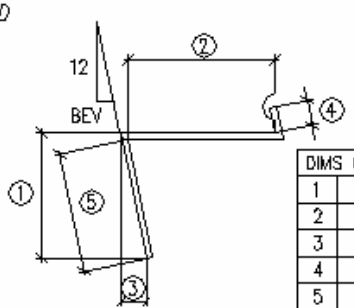
DETAIL OF BOTTOM PLATE

AT TYPE 2 END
OR DOGLEG



DIMS ON PLATE	
1	
2	
3	
4	
BEV	
WIDTH	

DETAIL OF TOP TREAD

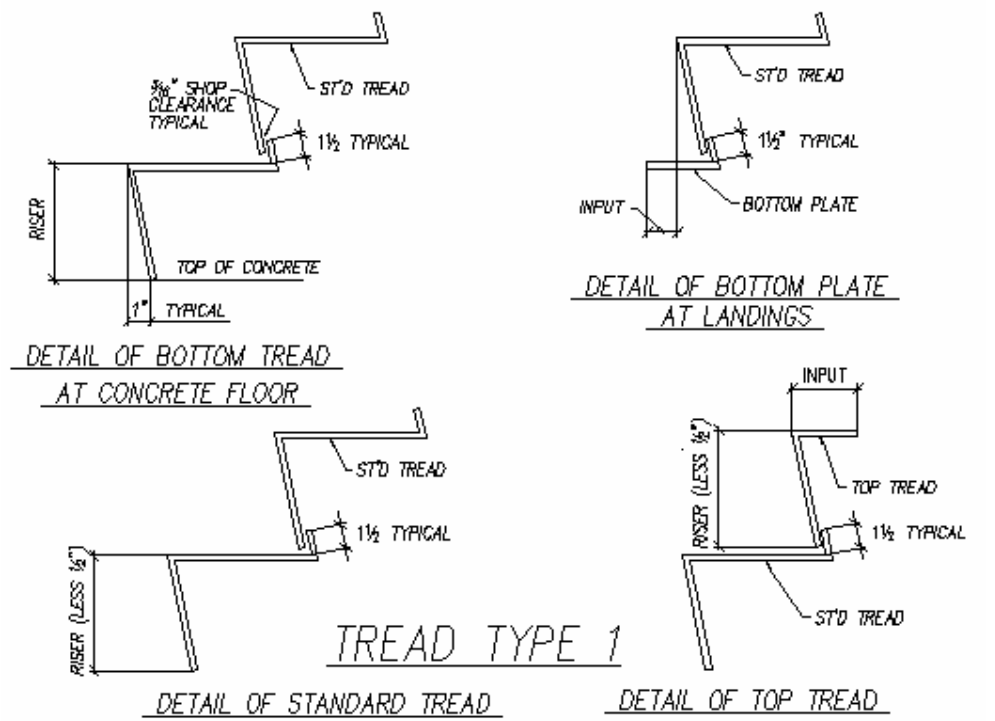


DIMS ON PLATE	
1	
2	
3	
4	
5	
BEV	
WIDTH	

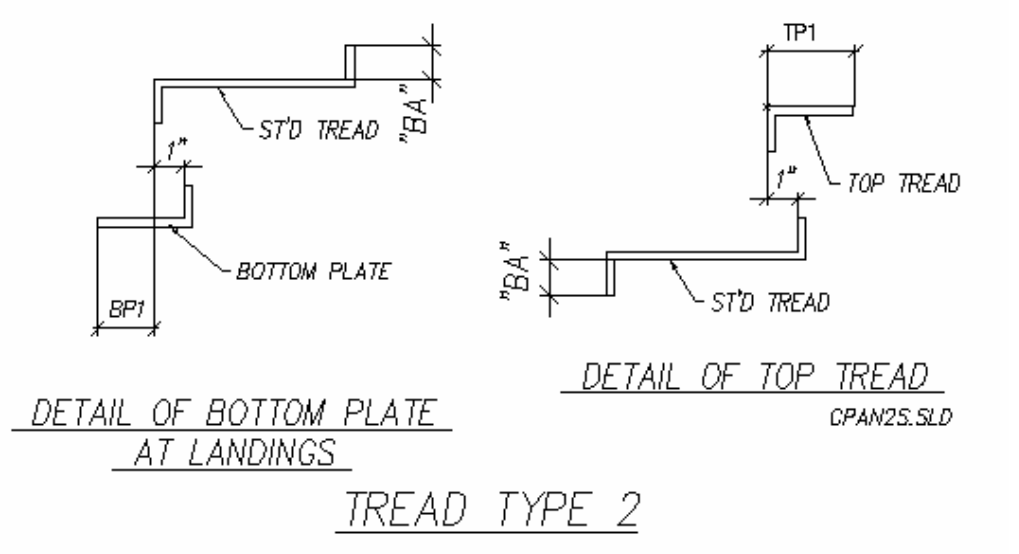
DETAIL OF STANDARD TREAD

SSDCP Manual

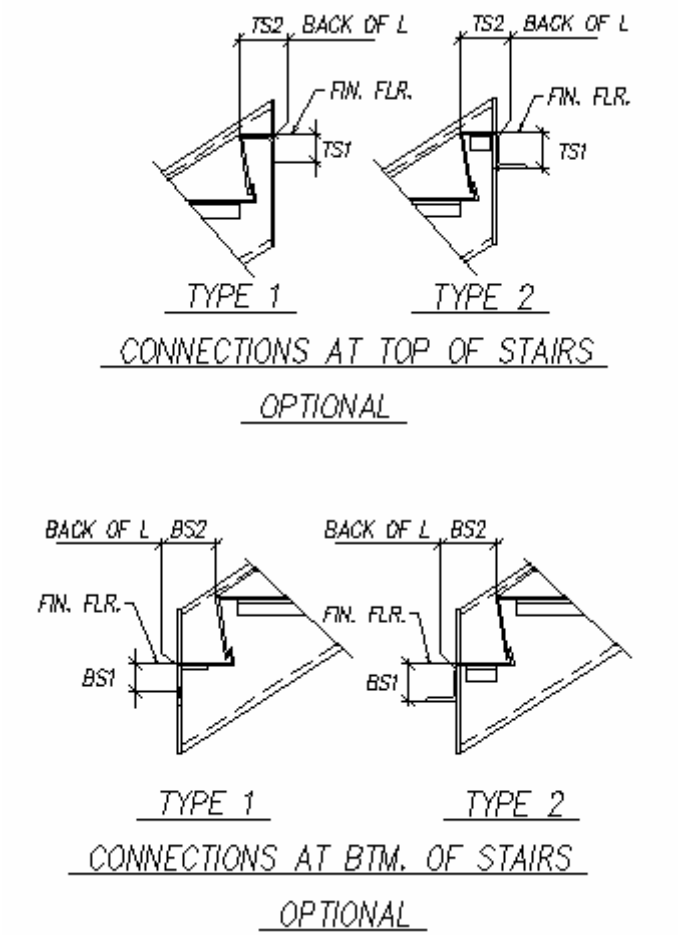
Tread Type 1



Tread Type 2


ST'D TREAD
"BA"
1"
BOTTOM PLATE
BP1
TP1
1"
TOP TREAD
"BA"
ST'D TREAD
DETAIL OF BOTTOM PLATE AT LANDINGS
DETAIL OF TOP TREAD
CPAN2S.SLD
TREAD TYPE 2

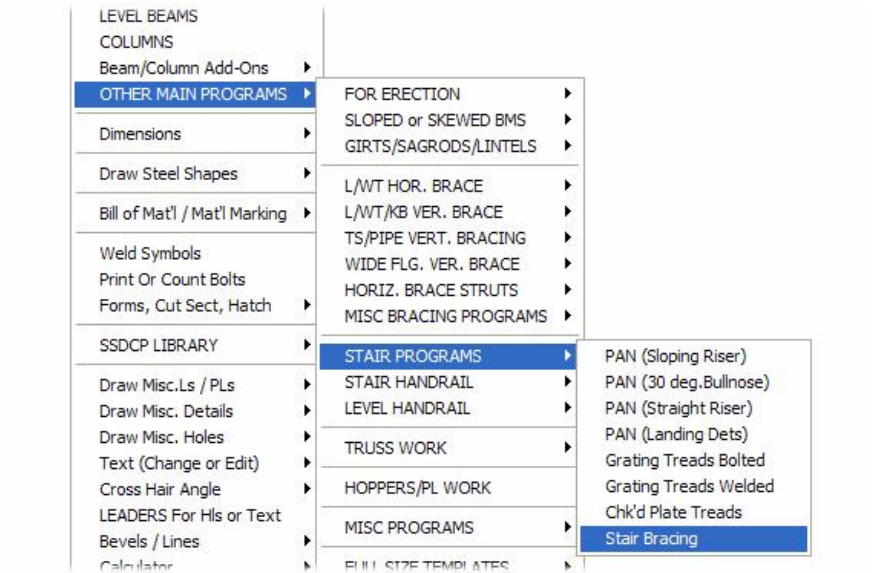
Connections at Stairs

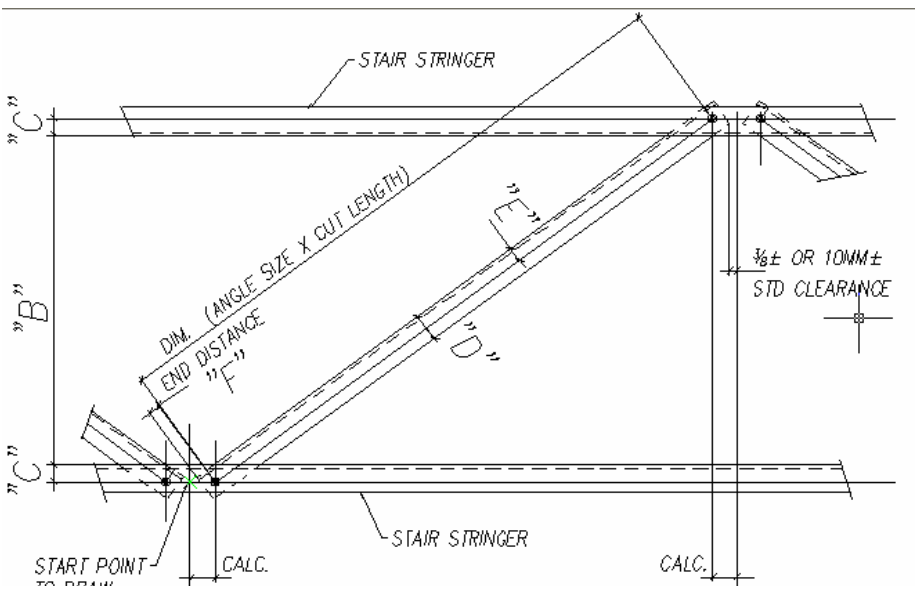


Stair Bracing

Draws bracing for stair stringers.

SSDCP Manual





SSDCP Manual



SSDCP Manual

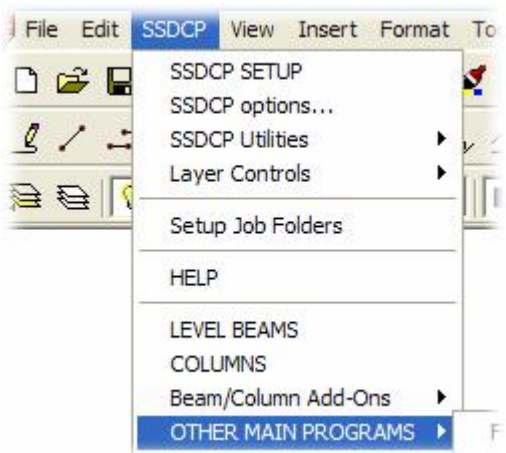
Stair Handrail

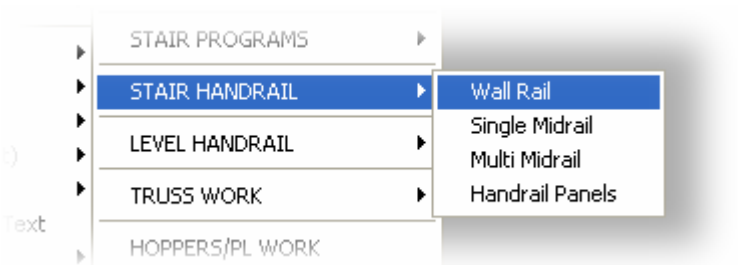
Wall Handrail

DESCRIPTION

Because wall rail is very simple, it is not necessary to draw the sloping length to scale. This will allow you to put more details on a sheet. However, the bevel and top & bottom details of the rail will be drawn to scale.

COMMAND





The first thing you will be required to do is decide how big you want to draw this wall rail.

than the actual calculated dimensions, then the actual calculated dimensions will be used to draw the wall rail.

If you are not sure how many brackets will be required, enter (1) one. The program will check to make sure you have enough based on the maximum bracket spacing.

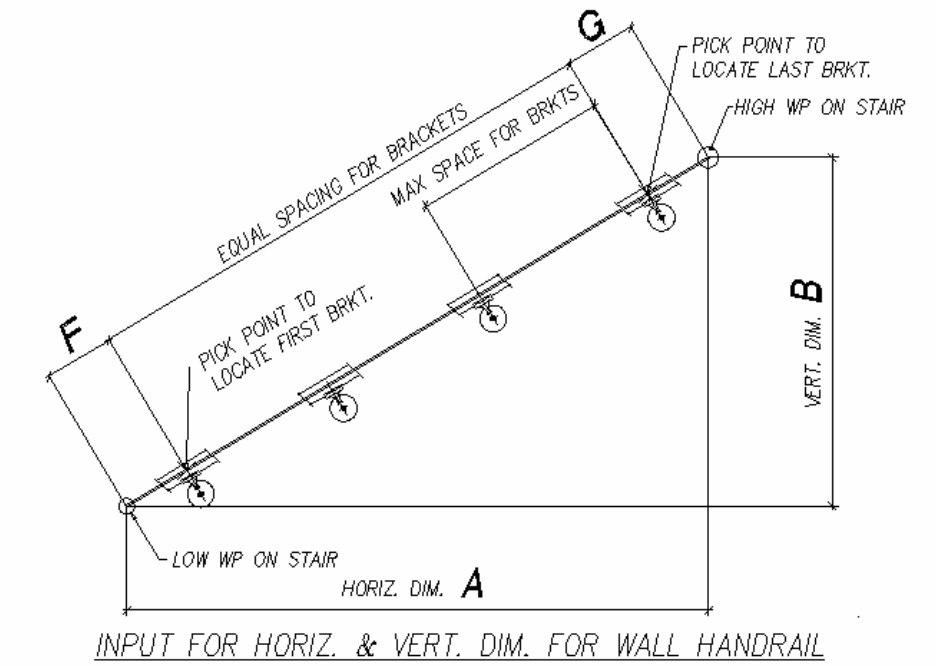
INSTRUCTIONS FOR LOCATING WALL RAIL BRACKETS
The brackets will be drawn in this order:

1. First bracket: Closest to the lower left WP.
2. Last bracket if required: Closest to the upper right WP.
3. Rest of the brackets if required: Between these brackets.

DRAWING SCALE: 1"=1' or 3/4" = 1' or MM Equivalent

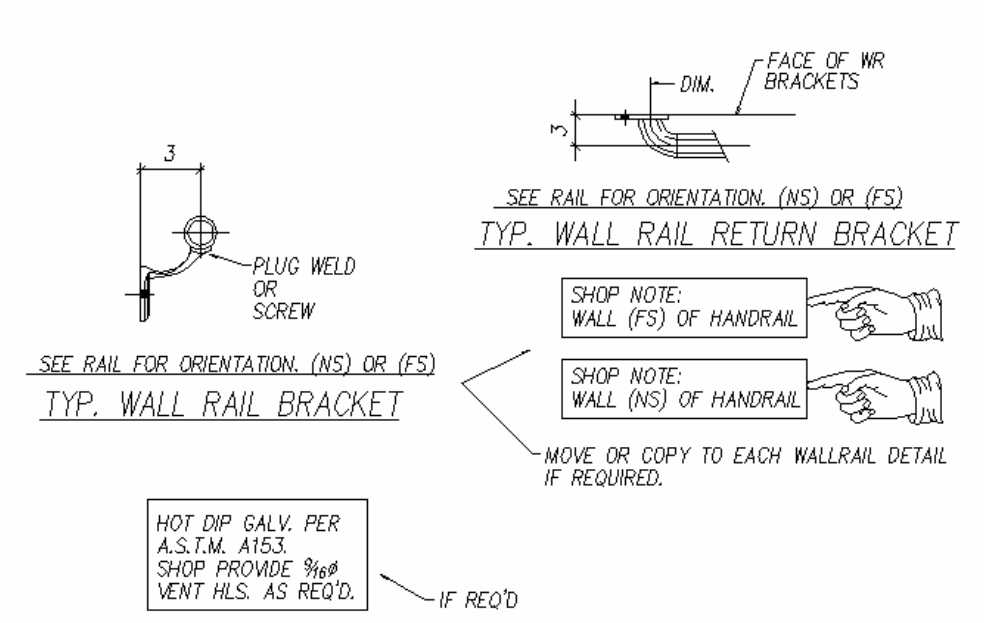
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs.

Wall Handrail Inputs



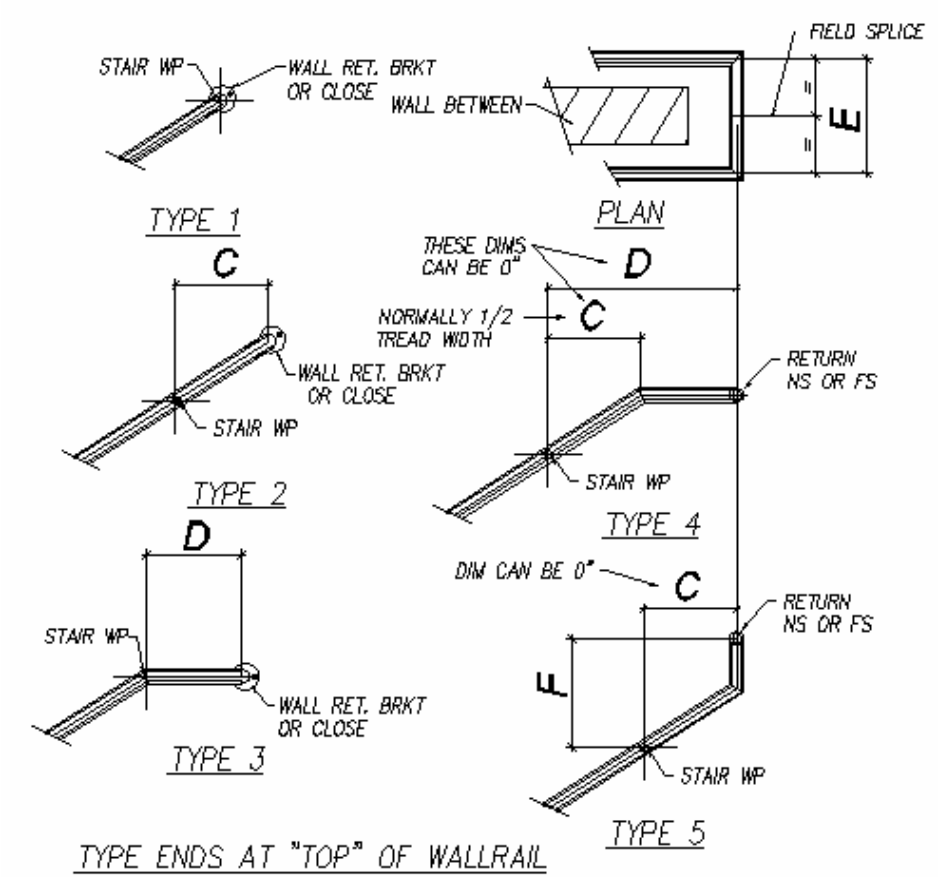
SSDCP Manual

Wall Handrail Brackets

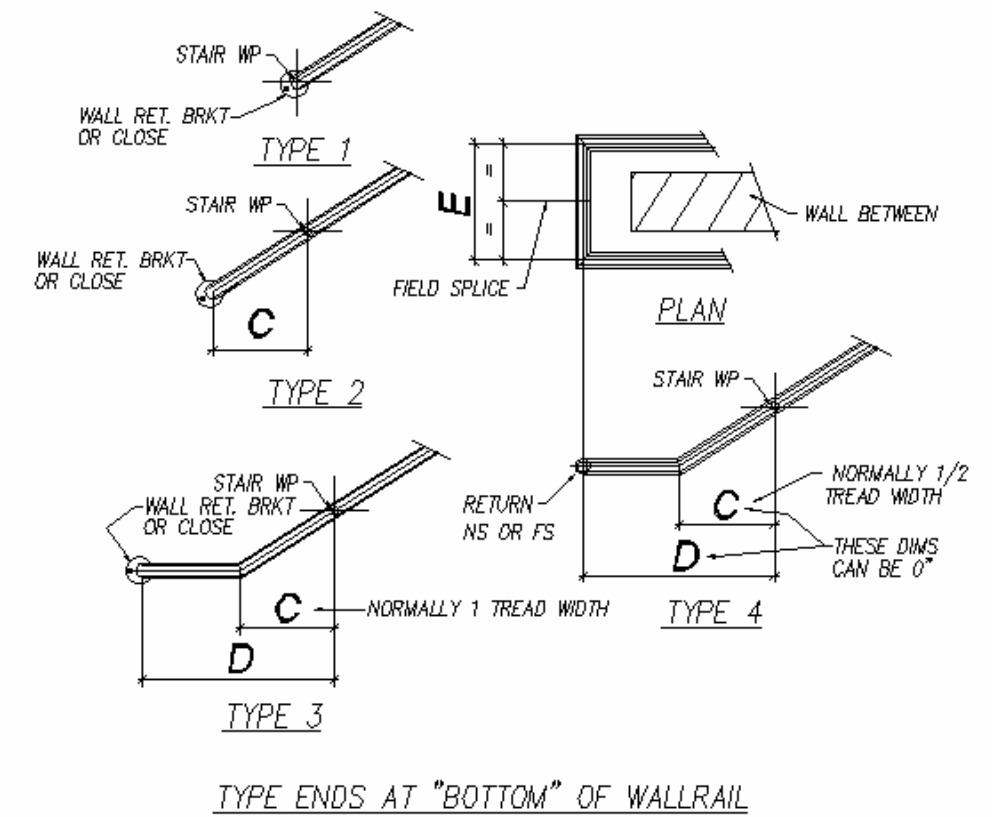

FACE OF WR BRACKETS
DIM.
3
3
PLUG WELD OR SCREW
SEE RAIL FOR ORIENTATION. (NS) OR (FS)
TYP. WALL RAIL RETURN BRACKET
SHOP NOTE: WALL (FS) OF HANDRAIL
SHOP NOTE: WALL (NS) OF HANDRAIL
SEE RAIL FOR ORIENTATION. (NS) OR (FS)
TYP. WALL RAIL BRACKET
MOVE OR COPY TO EACH WALLRAIL DETAIL IF REQUIRED.
HOT DIP GALV. PER A.S.T.M. A153.
SHOP PROVIDE 9/16ø VENT HLS. AS REQ'D.
IF REQ'D

SSDCP Manual

Wall Handrail Top End Types



Wall Handrail Bottom End Types

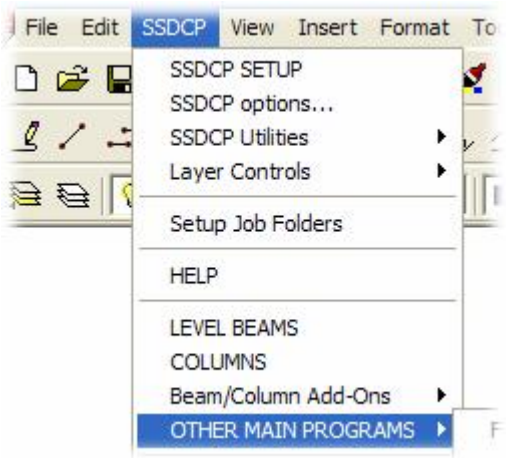


Single Line Rail

DESCRIPTION

This handrail can be bolted, welded, or use sleeve connection for posts. Because stair rail is very simple, it is not necessary to draw the sloping length to scale. This will allow you to put more details on a sheet. However, the bevel, height, and top & bottom details of the rail will be drawn to scale.

SSDCP Manual



You will be required to show the size you want the handrail to be drawn. To do this, you will pick the lower left work point to start from, and then pick a point to the right to show how large you want this picture drawn. All rails will be drawn from lower left to upper right.

This allows you to draw a long handrail in a small space. However, if the distance between the two chosen points is greater than the actual calculated dimensions, then the actual calculated dimensions will be used to draw the stair rail.

NOTE: This program can also be used for drawing handrails for concrete ramps (either level of sloping).

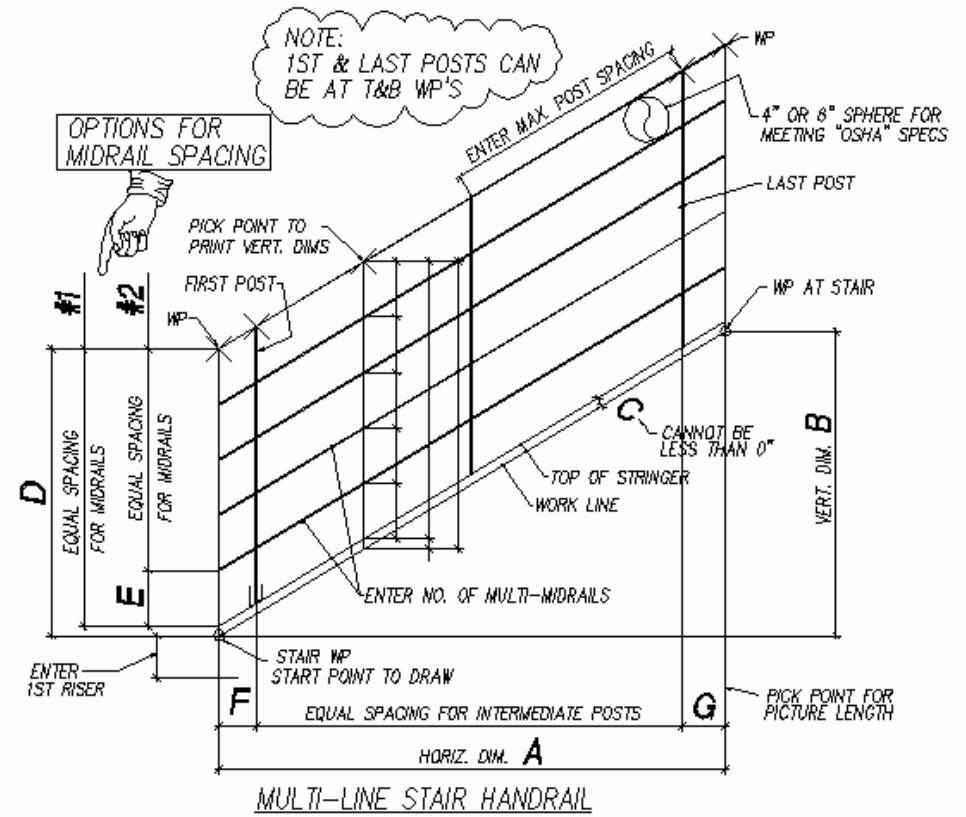
SSDCP Manual

There is no way that every condition you will have at the bottom and top of handrails can be covered. You will have several different types of conditions at the top and bottom of handrails that you can select from. If the conditions are not quite what you want, select the one closest to your condition. You may have to modify the details a little when the program is complete.

DRAWING SCALE: 3/4"=1' or MM equivalent

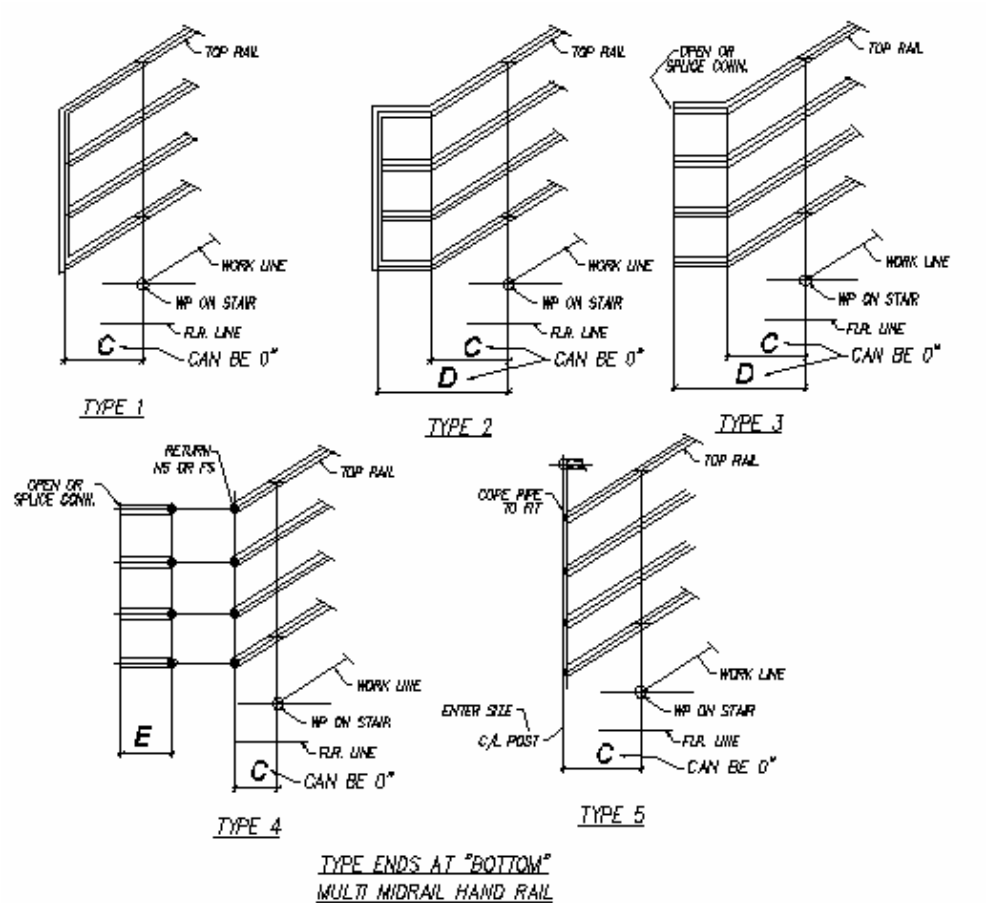
Multi-Line Stair Rail

Multi-Line Stair Rail Inputs



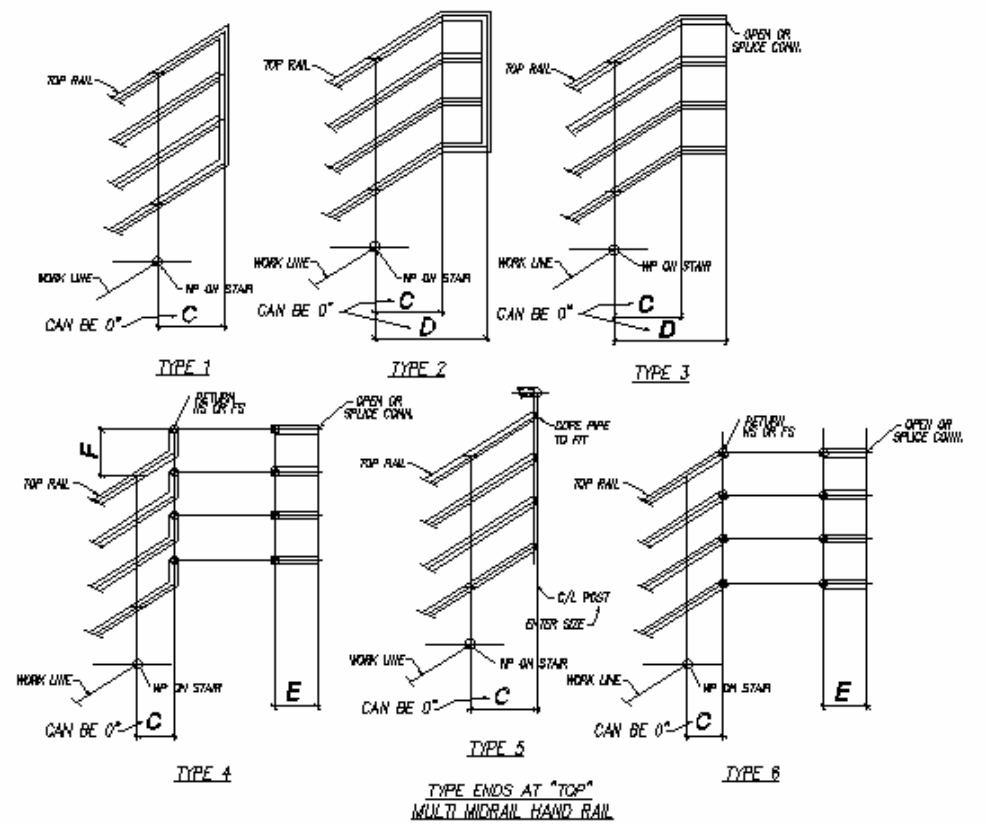
SSDCP Manual

Multi-Line Bottom Ends



DETAILER'S NOTE:
We can't cover every condition you might have when detailing stair rail. You may have to modify the picture to suit "special" conditions other than shown. Select type number "closest" to condition.

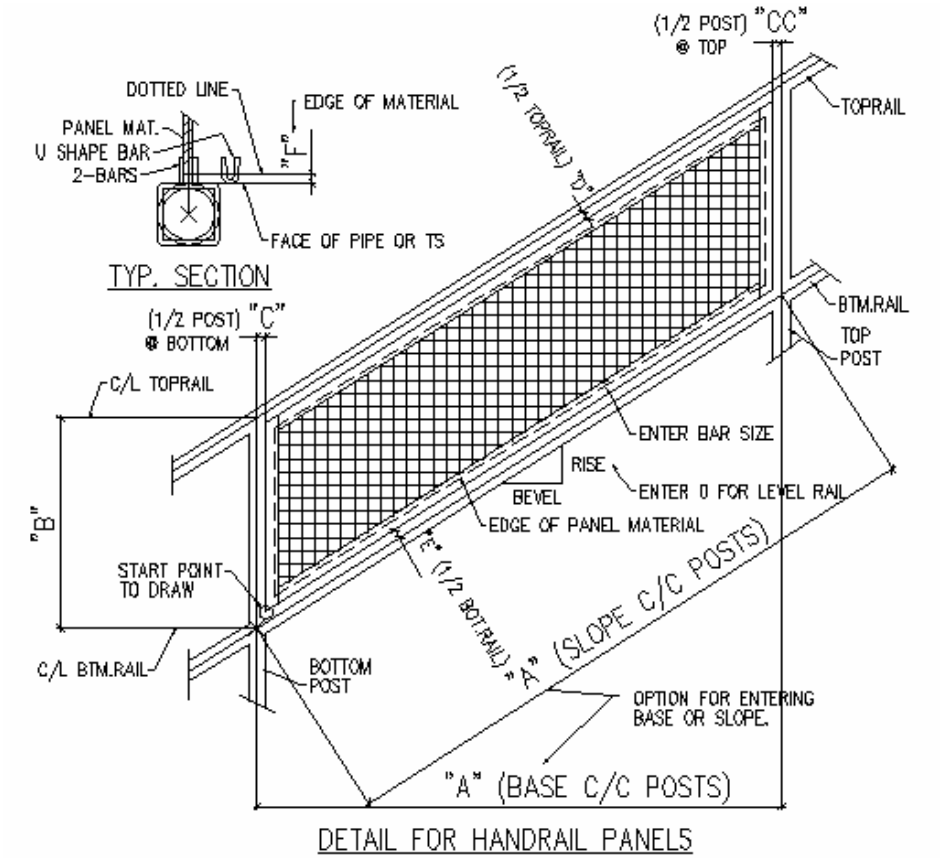
Multi-Line Top Ends



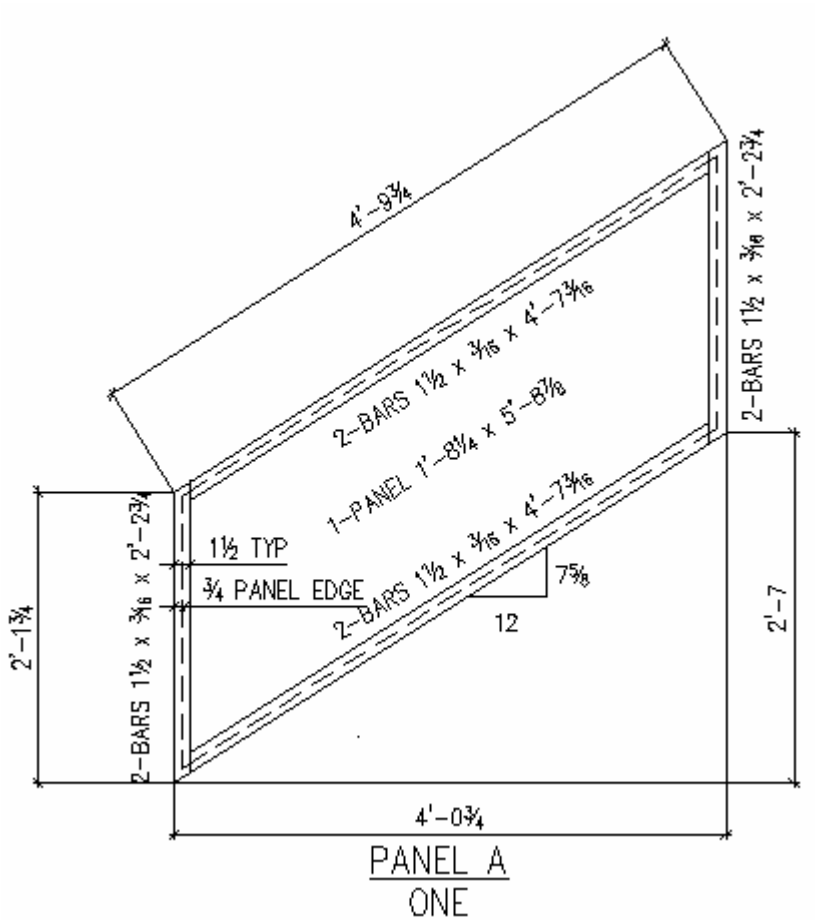
DETAILER'S NOTE:
We can't cover every condition you might have when detailing stair rail. You may have to modify the picture to suit "special" conditions other than shown. Select type number "closest" to condition.

SSDCP Manual

Handrail Panel Inputs



Handrail Panel Detail

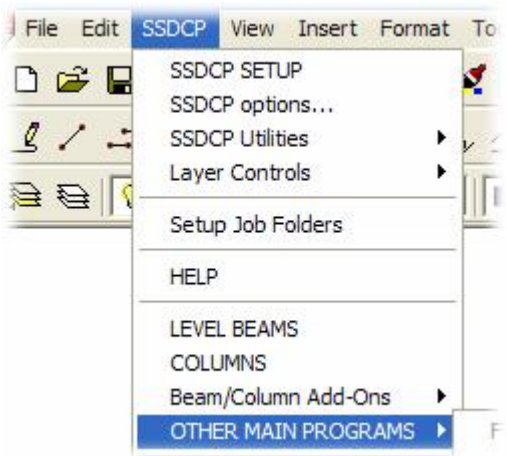


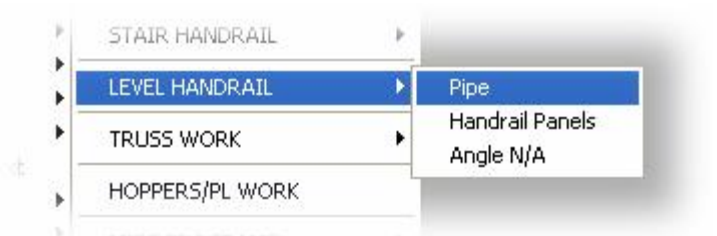
Level Pipe Handrail

DESCRIPTION

This program draws straight pipe handrail. You could use tube steel is you wish, but you will have to change the material size and some of the dimensions to toe plate bend lines after the program is complete. You will have your choice for welded, bolted, or sleeve type connections at bottom of posts.

COMMAND





You must detail all handrail looking from outside of platforms. Start detailing handrail from the left end (splice or end condition) and work toward the right end. Work counter clockwise around platform.

If you have a nearside return on either end of the handrail, you will have to cut a section

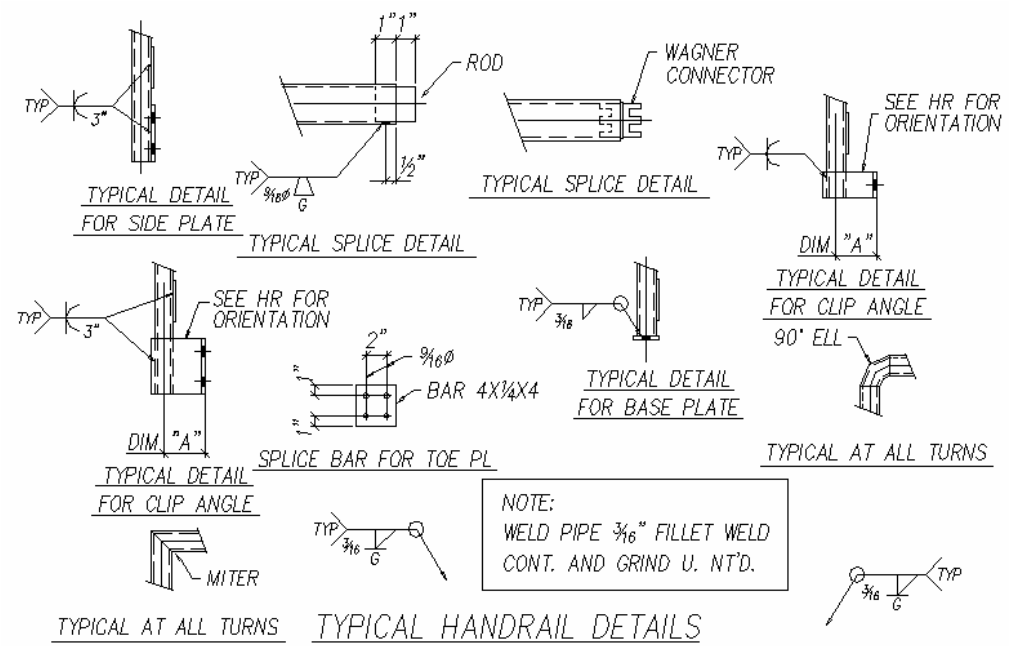
SSDCP Manual

This program will draw pickets or baluster bars between posts if you choose a single mid-rail type handrail. The program can check number of mid-rails to meet OSHA standards.

DRAWING SCALE: 3/4"=1' or MM equivalent

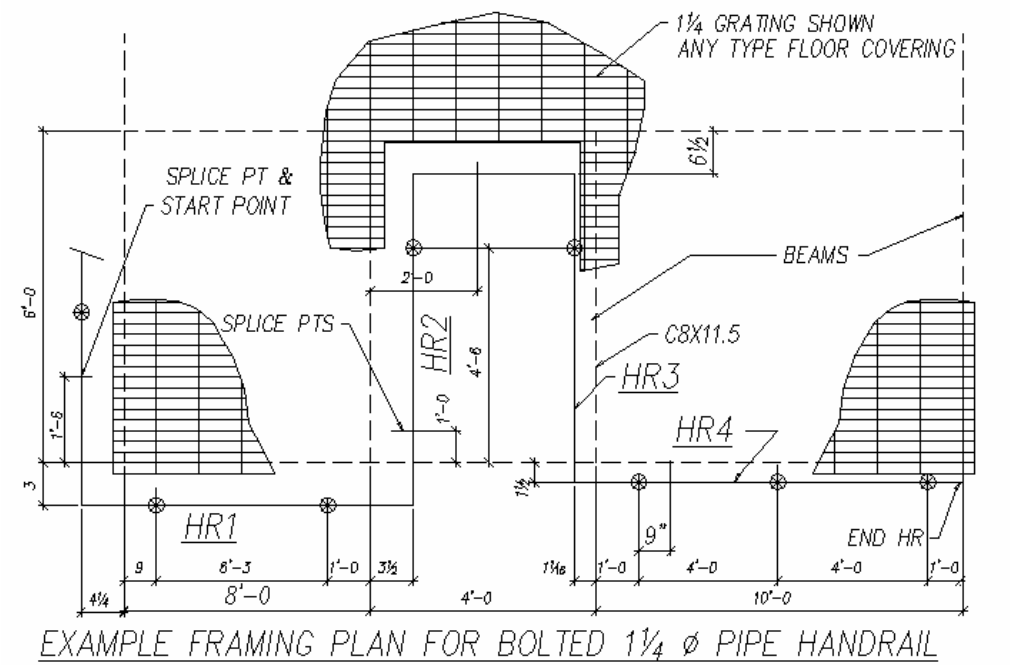
NOTE: This program draws handrail to scale lengthwise.

Typical Handrail Details



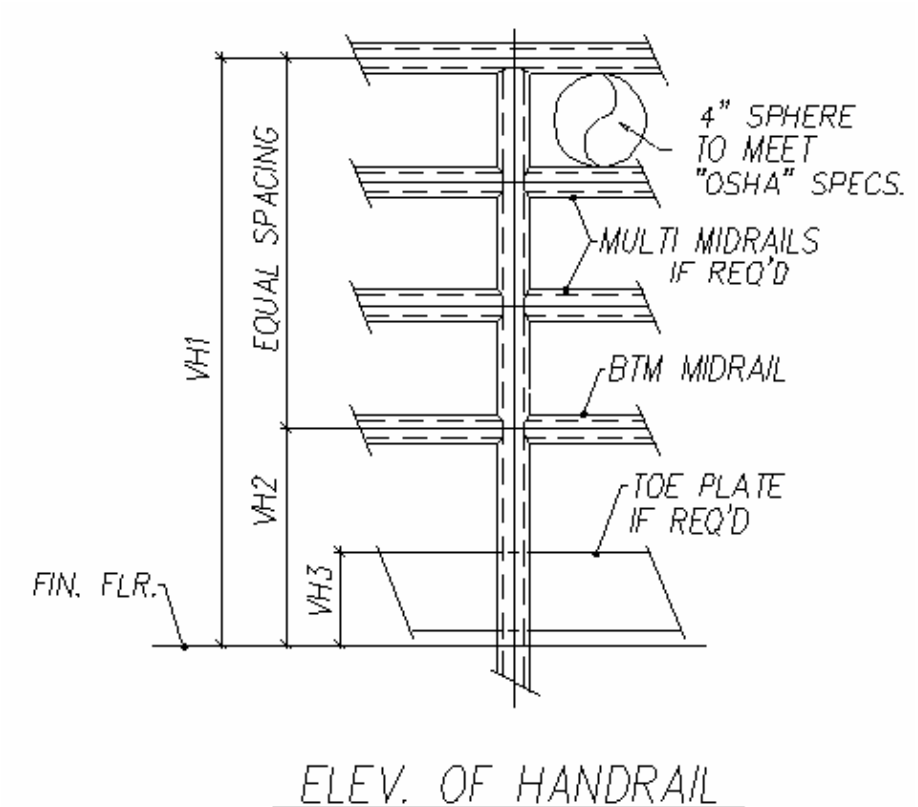
SSDCP Manual

Example Handrail Framing Plan

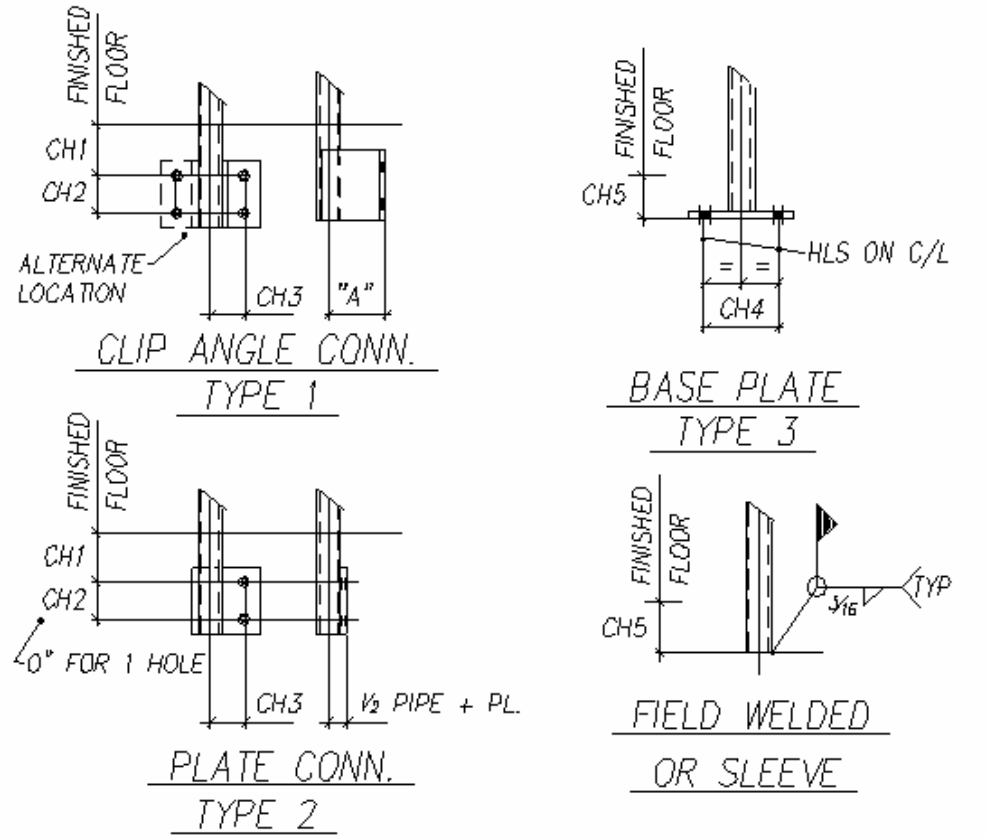


SSDCP Manual

Handrail Elevations

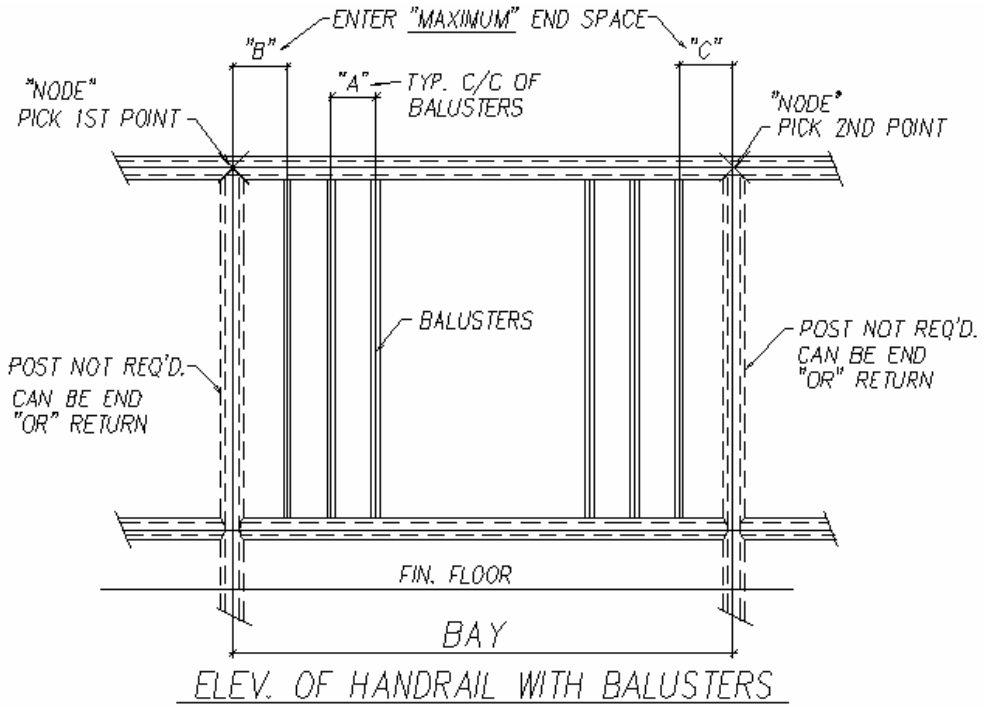


Handrail Connection Details



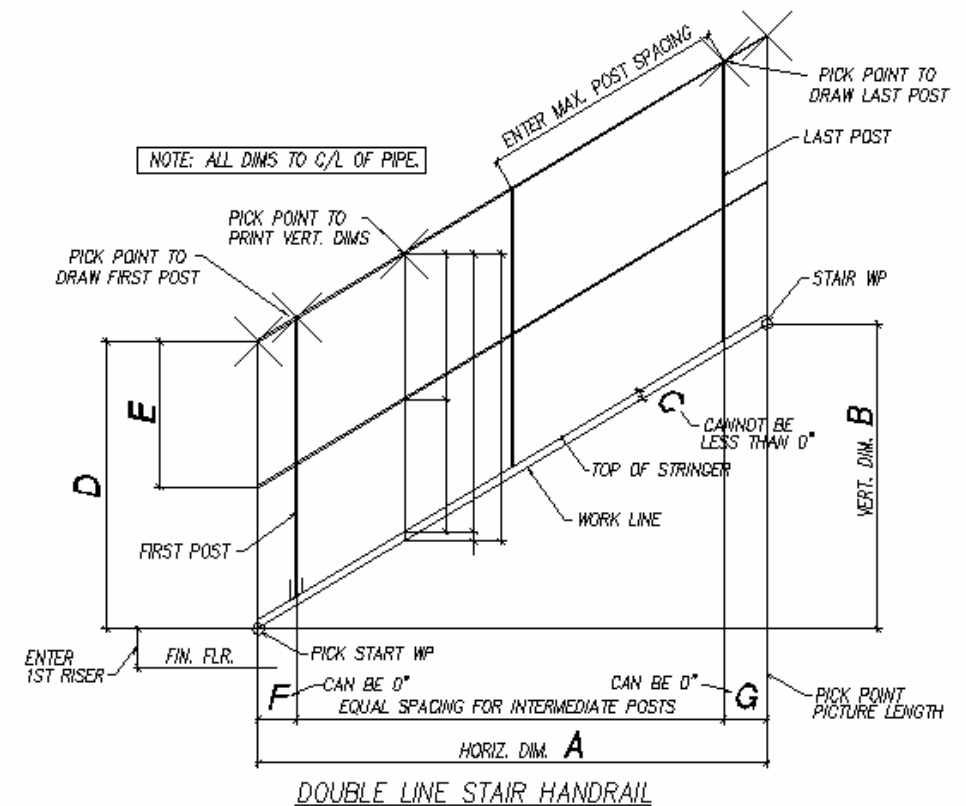
SSDCP Manual

Balusters For Double Line Handrail



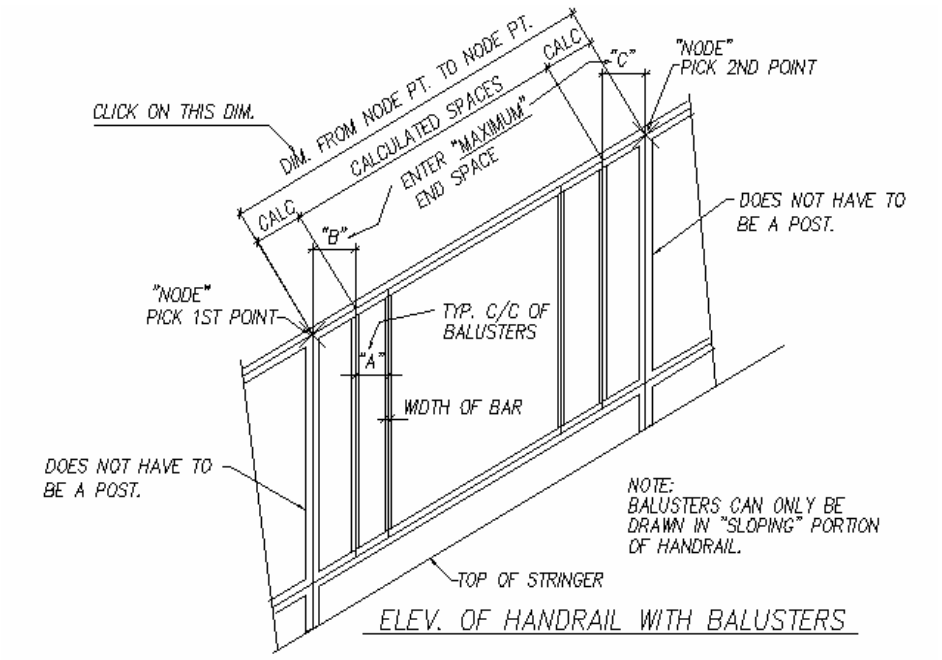
SSDCP Manual

Double Line Stair Inputs

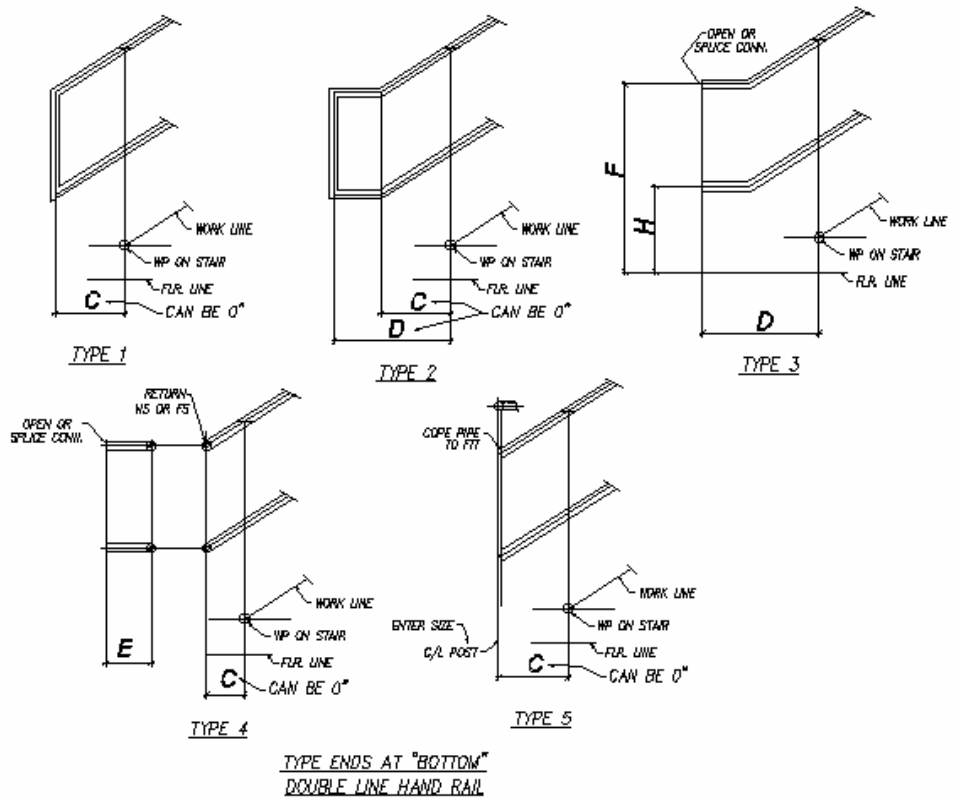


SSDCP Manual

Balusters for Double Line Handrail



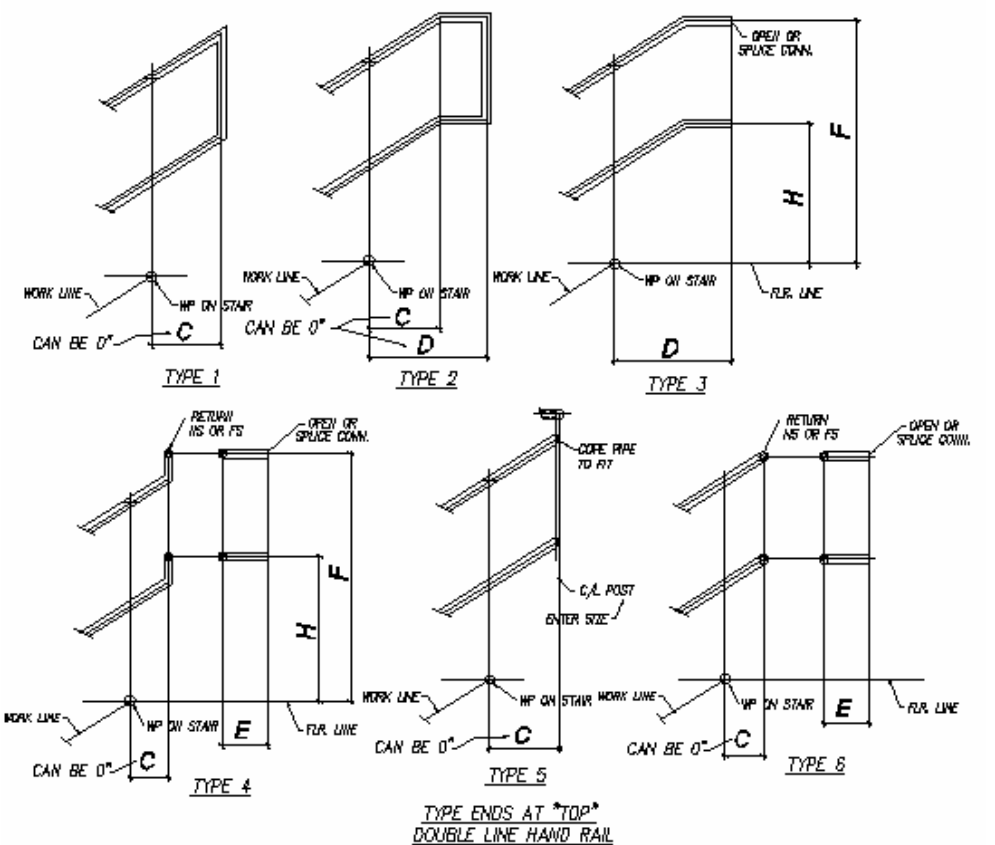
Double Line Hand Rail Bottom Ends



DETAILER'S NOTE:
We can't cover every condition you might have when detailing stair rail. You may have to modify the picture to suit "special" conditions other than shown. Select type number "closest" to condition.

SSDCP Manual

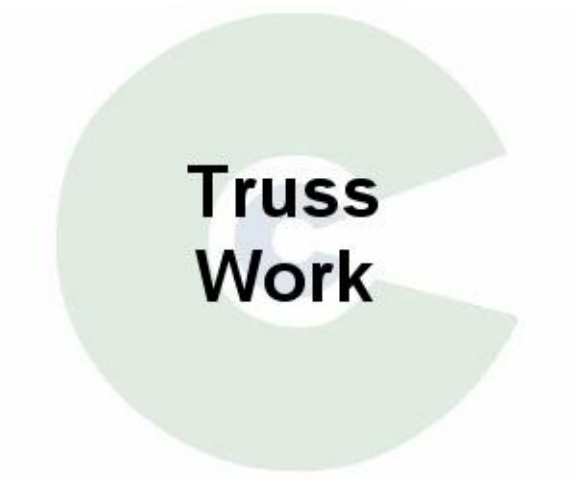
Double Line Top Ends



DETAILER'S NOTE:

We can't cover every condition you might have when detailing stair rail. You may have to modify the picture to suit "special" conditions other than shown. Select type number "closest" to condition.

SSDCP Manual



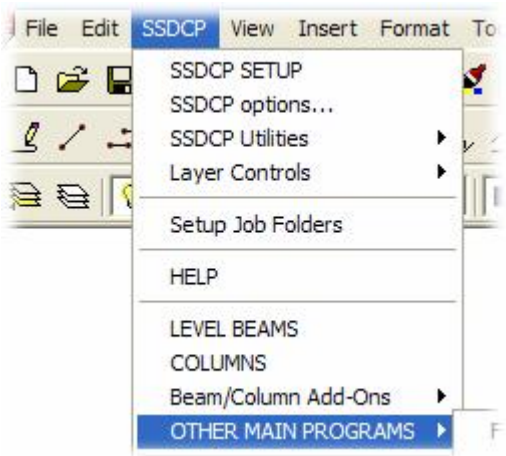
SSDCP Manual

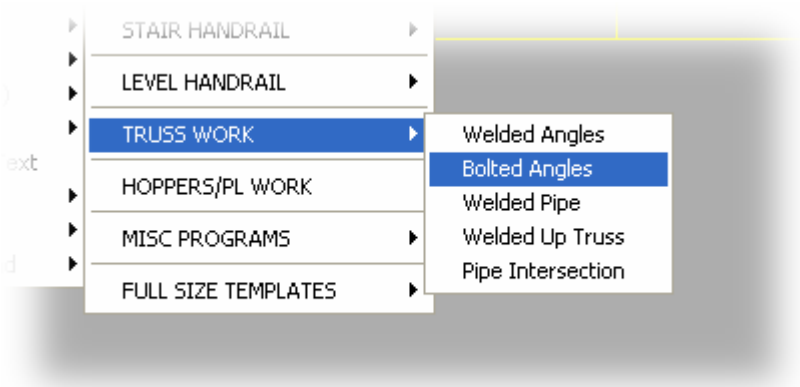
Bolted Truss

DESCRIPTION

This program draws bolted diagonal or vertical angles for trusses or walkways and gives all dimensions to fabricate the angles and gusset plates. You will have to draw the top and bottc chords of the truss and the end connections to the supports. It would be better to draw and layout your truss before running this program.

COMMAND

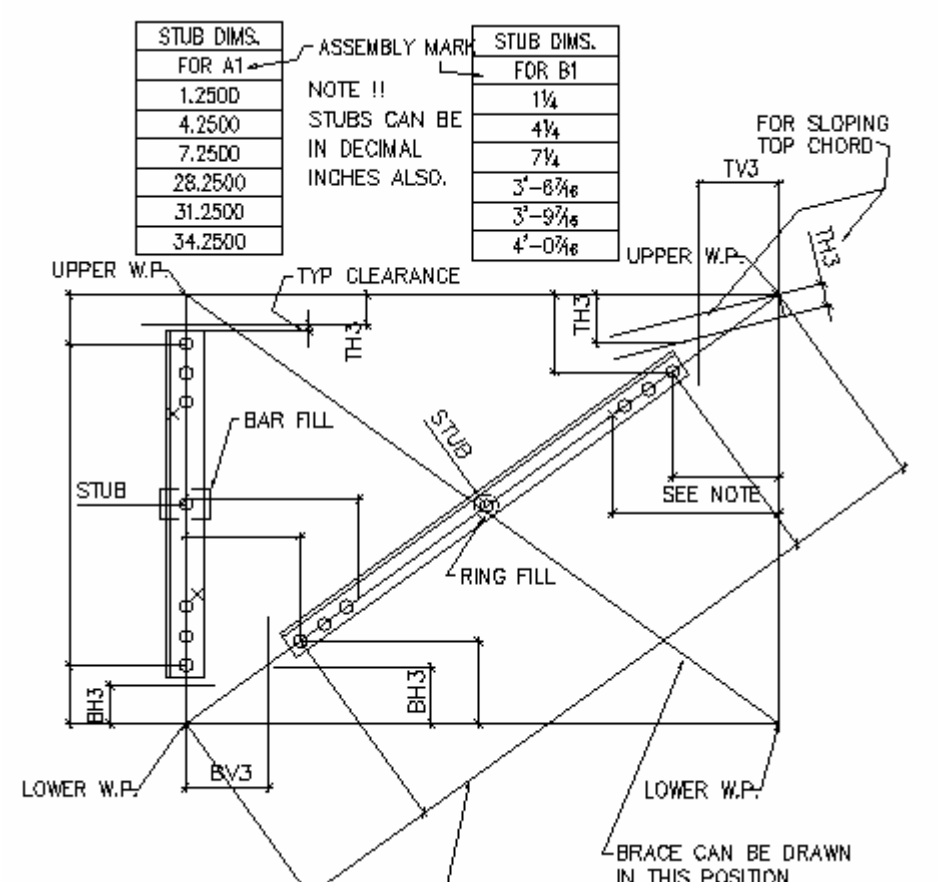




SSDCP Manual

You must draw to scale. Before you load this program, you must layout a single line diagram of the work point lines of the truss or frame to scale. This program can only work right if you draw to scale. You need to draw only the horizontal and vertical lines at the work points. Make sure the vertical lines do not extend beyond the horizontal lines. The top chord of your truss can slope uphill from left to right.

Bolted Vertical or Diagonals



SSDCP Manual

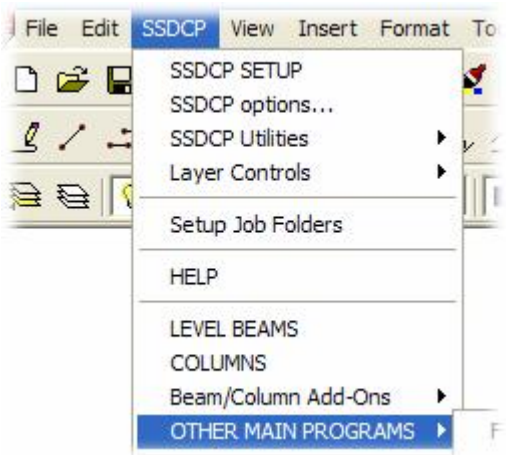
NOTES:

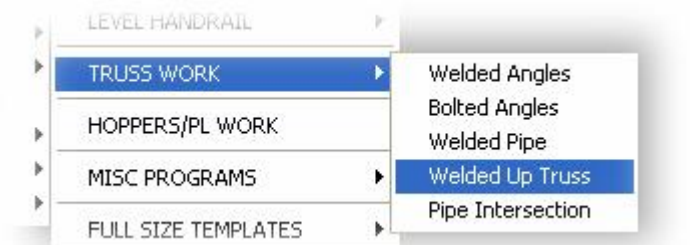
1. Bolt quantities are based on bolt size, loads and area of angles.
2. Plates are not completely drawn because of different conditions. However, the horizontal dimension is given and the edge of the plates are shown with a small "x" based on the edge distance for the size of the bolts.

YOU MUST DRAW TO SCALE TO USE THIS PROGRAM

Welded Truss

COMMAND





SSDCP Manual

This program will draw and do all calculations for a welded up truss. This program draws all dimensions and materials to scale. If you have a long truss, you will need to draw to a smaller scale and detail only as much of the truss as you can across the sheet. It is not recommended that you detail to any scale smaller than 1/2" to 1'- 0. Treat this truss as two different trusses and place one above the other on the sheet. You have a choice of two different type trusses. The top & bottom chords and vertical and diagonal members can be any of the following types of materials or any combination thereof:

1. Structural Pipe
2. Tube Steel Sections
3. Wide Flange or S-shape material
4. Special section only for T&B chords

All diagonals and verticals are drawn in position to be welded directly to the top and bottom chords; therefore connection plates are not required. The program has been written to allow only for top and bottom chords to be parallel to each other.

If you have a sloping top chord, you will have to manually fix the picture and adjust or scale new dimensions to correct.

Because of the many different type end connections for trusses, you will have to manually draw the connection material at the ends of the truss. You can use some of the misc. programs to assist you.

DRAWING SCALE: Not less than 1/2"=1' or MM equivalent

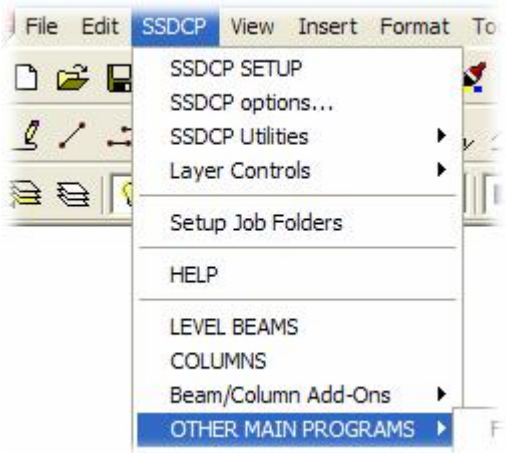
Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.

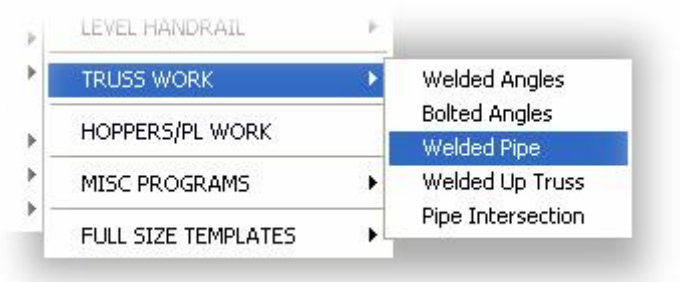
SSDCP Manual

Welded Pipe Diagonals

DESCRIPTION
This program draws welded diagonal or vertical pipes for trusses when the top & bottom chords are WT or angles. Gives all dimensions to fabricate the pipe and gusset plates. It computes the amount of weld required and sizes the gusset plates to accommodate that weld.

COMMAND



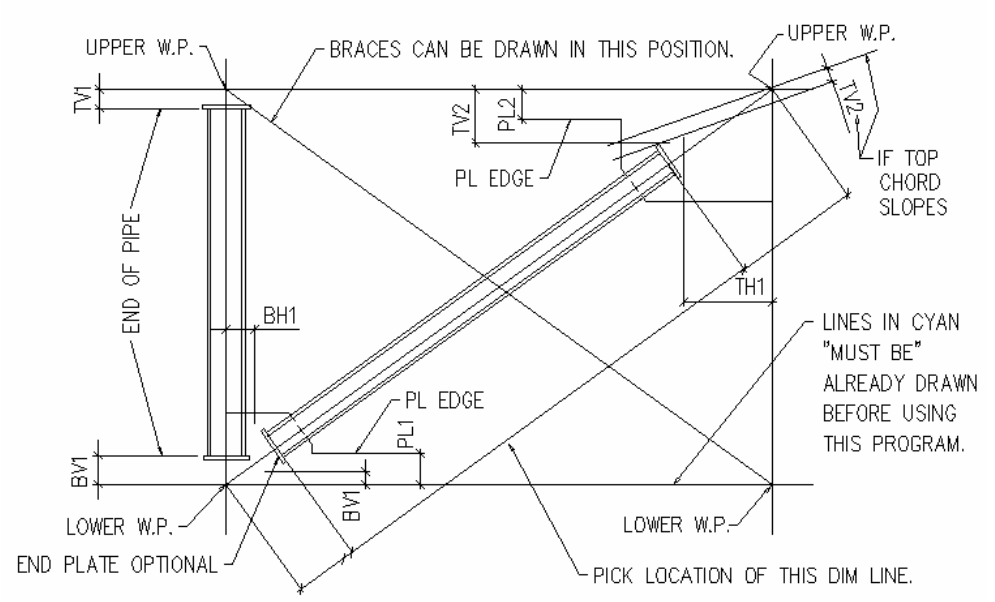


Drawing scale: 1"=1' (best, but can be smaller)

SSDCP Manual

Before you load this program, you must layout a single line diagram of the workpoint lines of the truss or frame to scale. You can draw the top & bottom chord members at this time, if you wish. This program only draws the vertical & diagonal members.

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.



GENERAL NOTES:
This program is useful when drawing trusses or catwalks that have welded pipe braces. You "must" draw to scale to use this program. The program will figure the amount of weld required for the pipe sizes entered or on the loads required. It then calculates the plate sizes required to accommodate the weld required. If a plate is not required depending on the entry of dims PL1 or PL2 then the plate is not drawn. The user, to suit different conditions, locates the locations of the overall dimension lines. The locations for dimensions on the plates on the plates are chosen by the user to suit conditions. An extra 1" of weld when calculating the amount of weld required per joint has been allowed for

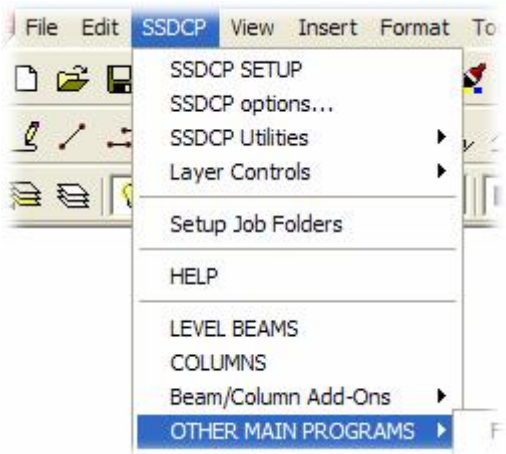
SSDCP Manual

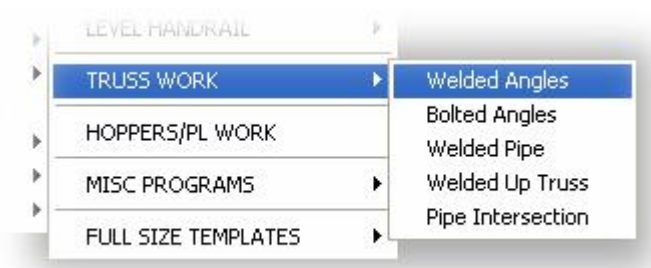
Welded Truss Diagonal

DESCRIPTION

This program draws welded diagonal or vertical angles for trusses or walkways and will also detail any generic type welded bracing. It will not draw the top and bottom chord material. It computes the amount of weld required and sizes the gusset plates to accommodate that weld.

COMMAND





DRAWING SCALE: 3/4"=1' (BEST)

SSDCP Manual

If you are detailing vertical and diagonal angles for truss, before loading the program you must layout a single line diagram of the workpoint lines of the truss or frame to scale. This program can only perform correctly if you draw to scale. You need to draw only the horizontal and vertical lines at the work points. The programs will allow for sloping top chords. If you are detailing generic type bracing this is not required, as the horizontal and vertical WP to WP will be asked for.

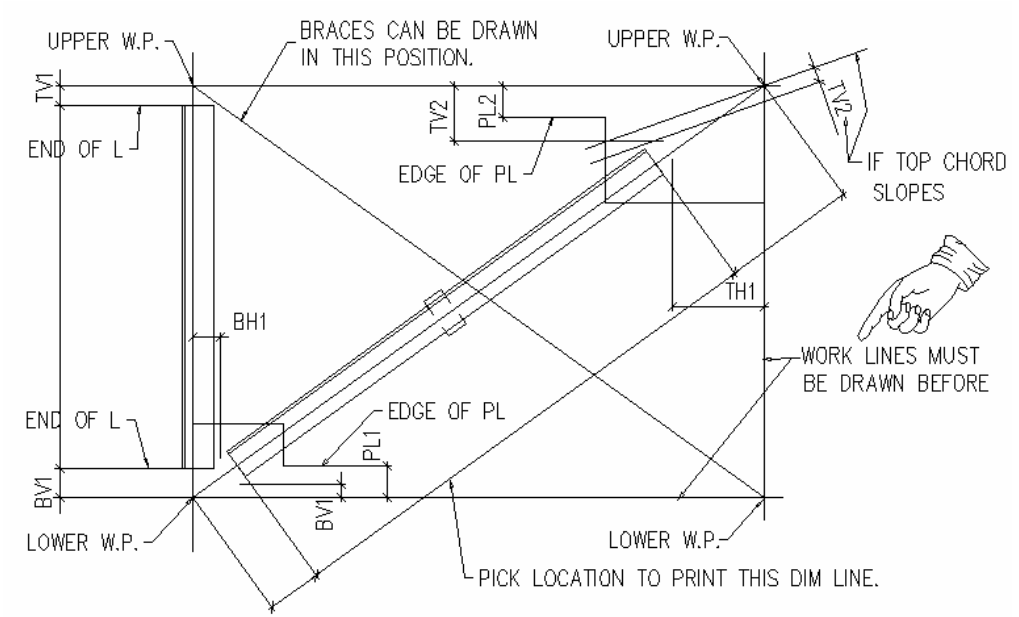
This program can be used in two different ways:
1. Detailing vertical or diagonal braces for trusses or catwalk framing. You must draw everything to scale.
2. Detailing generic type diagonal welded braces. Use shipping marks for this type. These braces will not be drawn to scale, WP to WP lengthwise.

If you choose not to draw the plates with the braces, the plates will be indicated using dotted lines. The dimensions will be given to the edges of the plates for reference. If you choose not to draw the plates, but want weld sizes on the drawing, a field weld symbol will be added. All bracing plate sizes will be rounded up to the nearest ¼ inch or 5mm.

Note: If you enter an incorrect dimension there is no way to recall it in order to make a change. In such case, you must break out of the program with a "control C" and restart the program. Enter your inputs carefully. Watch the command area on the screen for questions and dimension inputs. There will be slides to assist you on inputs.

Welded Verticals or Diagonals

SSDCP Manual

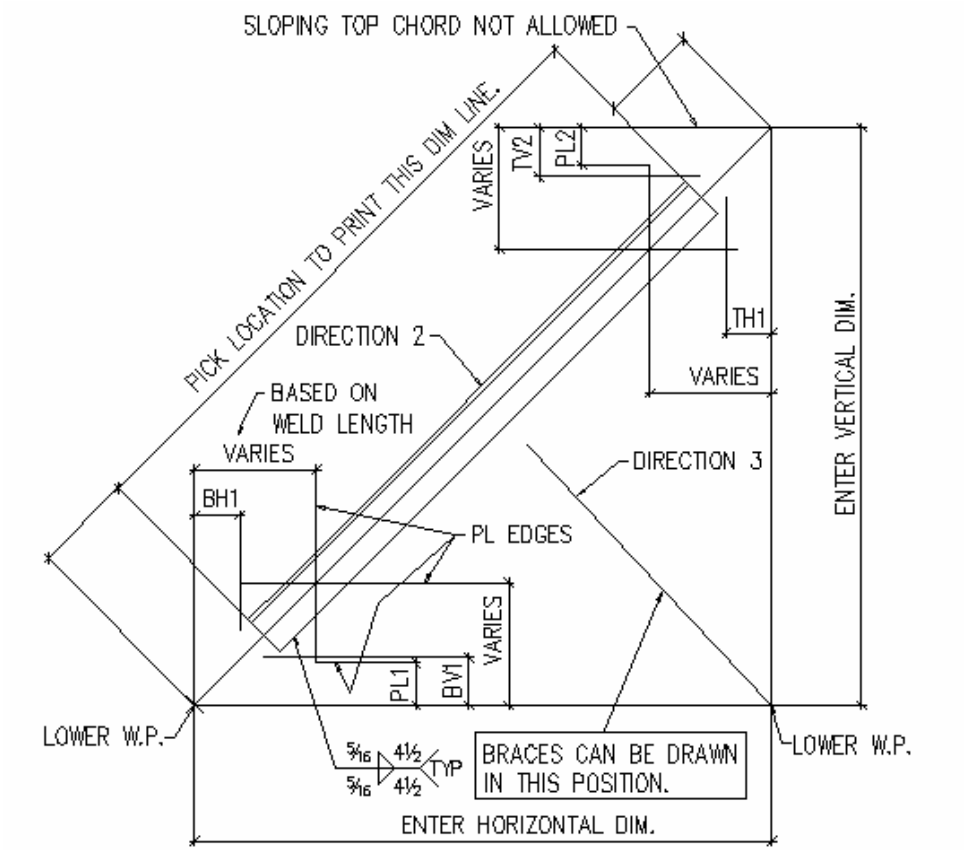


YOU MUST DRAW TO SCALE TO USE THIS PROGRAM

GENERAL NOTES:
This program is useful when drawing trusses or catwalks that have welded braces. You "must" draw to scale to use this program. The program will figure the amount of weld required for the angle sizes entered or on the loads required. It then calculates the plate sizes required to accommodate the weld required. If a plate is not required depending on the entry of dims PL1 or PL2 then the plate is not drawn. It will draw fills in double angle members if you want them. It draws the angles and dimensions as shown. The user, to suit conditions, locates the locations of the overall dimension lines. The locations for dimensions on the plates on the plates are chosen by the user to suit conditions. An extra 1" of weld when calculating the amount of weld required per joint has been allowed for. Amount if welds have been rounded up to the nearest ½".

Generic Welded Braces

SSDCP Manual



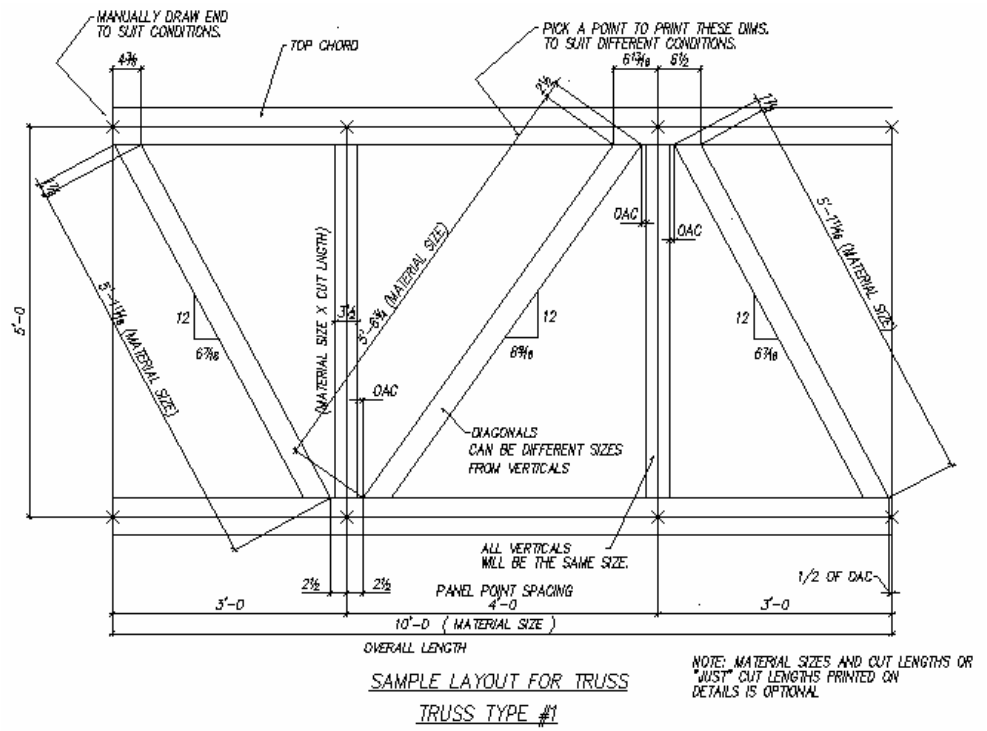
DOES NOT HAVE TO BE DRAWN TO SCALE

General Notes:

The program is useful when drawing "any" type of welded diagonal braces. The program will calculate the amount of weld required for the angle sizes entered or on the loads required. It then calculates the plate sizes required to accommodate the weld required. It will draw fills in double angle members if you want them. It draws the angles and dimensions as shown. The user, to suit conditions, locates the locations of the overall dimension lines. The locations for dimensions on the plates on the plates are chosen by the user to suit conditions.

SSDCP Manual

Truss Samples



SAMPLE LAYOUT FOR TRUSS

TRUSS TYPE #1

NOTE: MATERIAL SIZES AND CUT LENGTHS OR "JUST" CUT LENGTHS PRINTED ON DETAILS IS OPTIONAL

SSDCP Manual



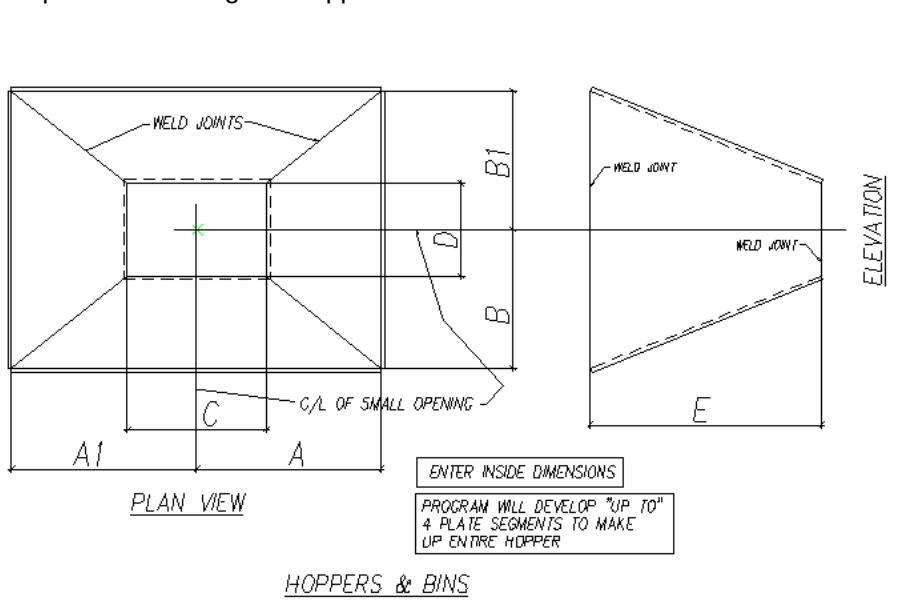
SSDCP Manual

Hoppers/Plate Work

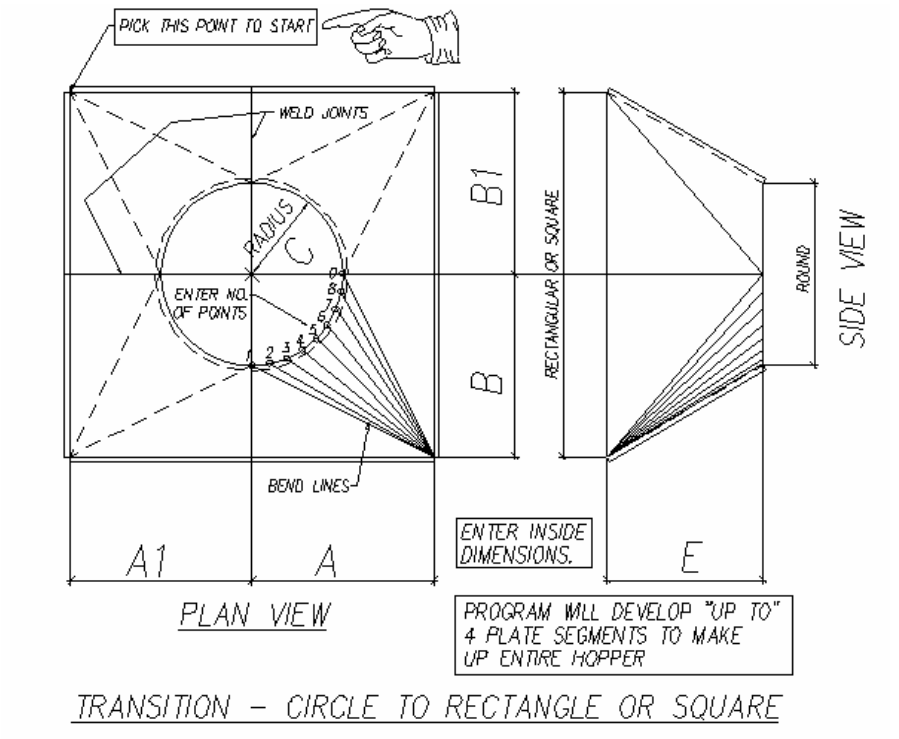
These programs will draw a plan view, elevations, and up to 4 developed plates, depending on condition. This program draws to scale, except for plate thickness. Depending on scale and plate thickness, the plates could be drawn thicker for plotted clarity.

If the hopper is very large, draw to a smaller scale. All dimensions entered must be to "inside" of hoppers. Select the type desired and the input slides will show the user what needs to be input.

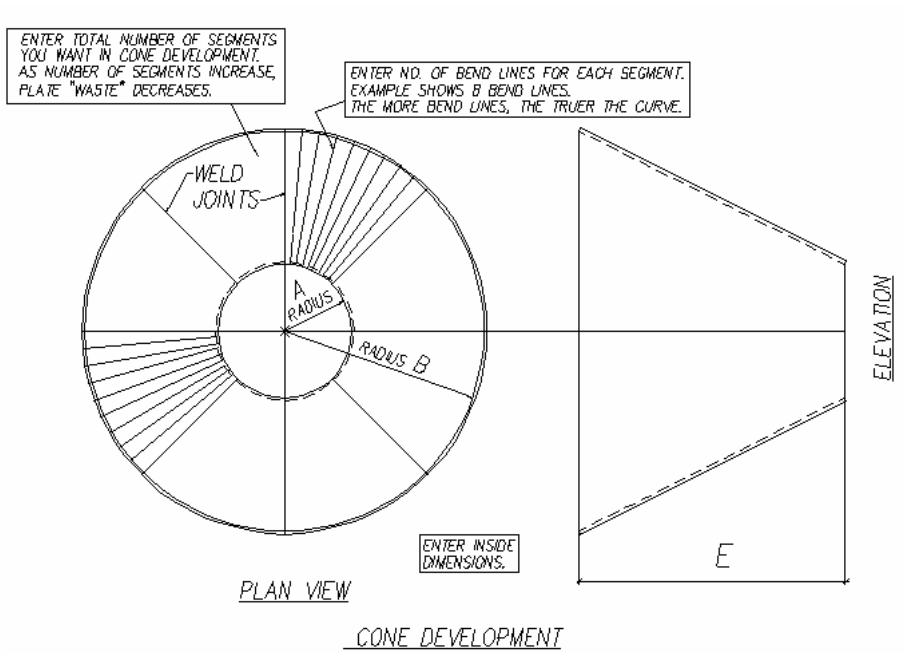
1. Square or Rectangular Hoppers and Bins



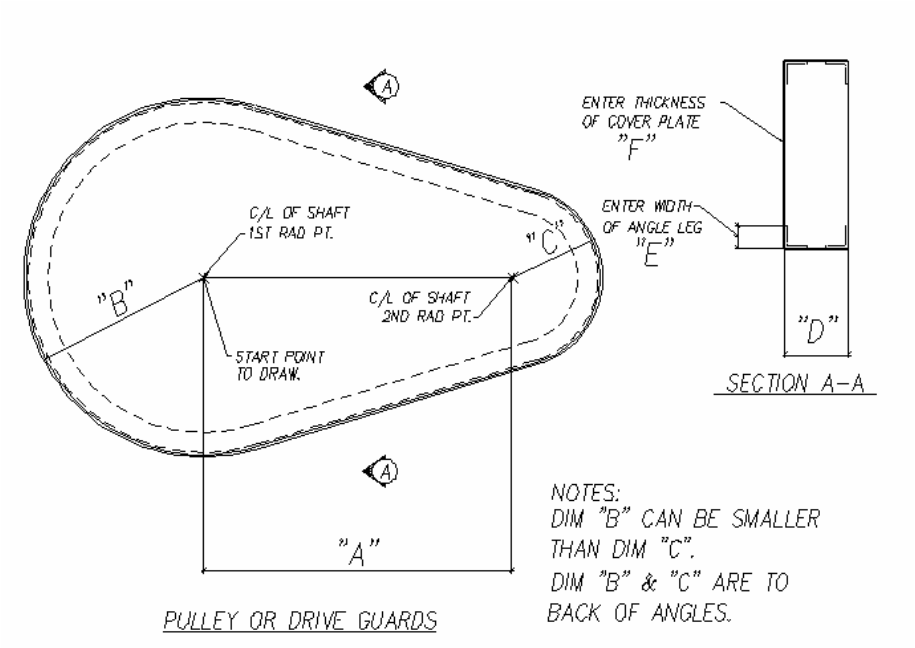
2. Square or Rectangular to ROUND Transitions


PICK THIS POINT TO START
WELD JOINTS
RADIUS
C
ENTER NO. OF POINTS
B1
B
RECTANGULAR OR SQUARE
ROUND
SIDE VIEW
BEND LINES
A1
A
E
ENTER INSIDE DIMENSIONS.
PLAN VIEW
PROGRAM WILL DEVELOP "UP TO" 4 PLATE SEGMENTS TO MAKE UP ENTIRE HOPPER
TRANSITION – CIRCLE TO RECTANGLE OR SQUARE

3. Cones


ENTER TOTAL NUMBER OF SEGMENTS YOU WANT IN CONE DEVELOPMENT. AS NUMBER OF SEGMENTS INCREASE, PLATE "WASTE" DECREASES.
ENTER NO. OF BEND LINES FOR EACH SEGMENT. EXAMPLE SHOWS 8 BEND LINES. THE MORE BEND LINES, THE TRUER THE CURVE.
WELD JOINTS
A RADIUS
RADIUS B
ENTER INSIDE DIMENSIONS.
E
ELEVATION
PLAN VIEW
CONE DEVELOPMENT

4. Pulley Guards



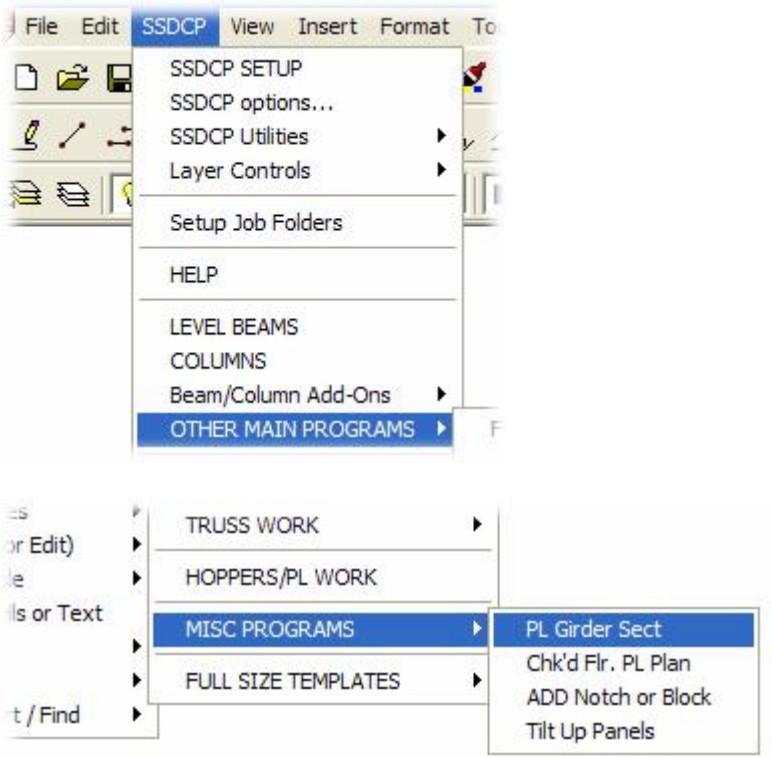
PULLEY OR DRIVE GUARDS


Miscellaneous
Programs

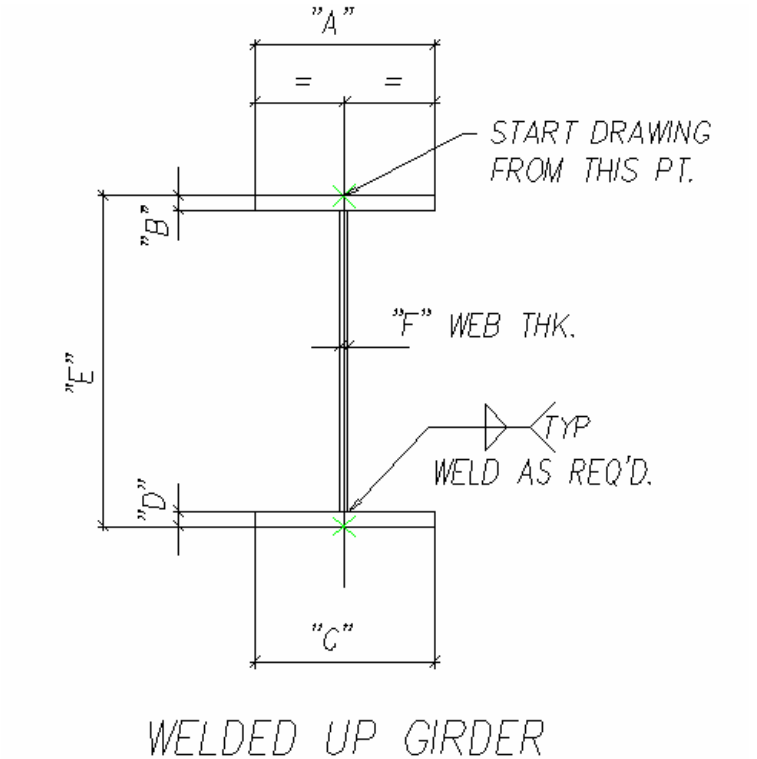
SSDCP Manual

Miscellaneous Programs

Plate Girder Section



SSDCP Manual

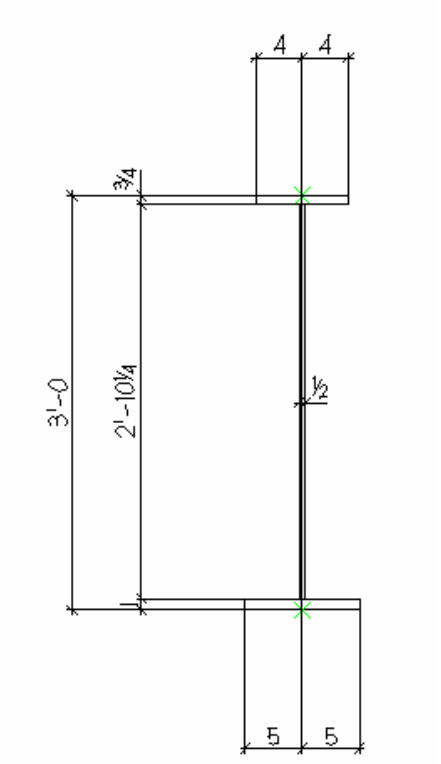


The first question will be “Are the T & B Flanges the same?

If “yes” is chosen, answer the following based on the slide
Dim. A – Top Flange plate width
Dim. B – Top Flange plate thickness
Dim. E – Total depth of girder
Dim. F – Web plate thickness

The last question will be “Do you want the girder dimensioned?”

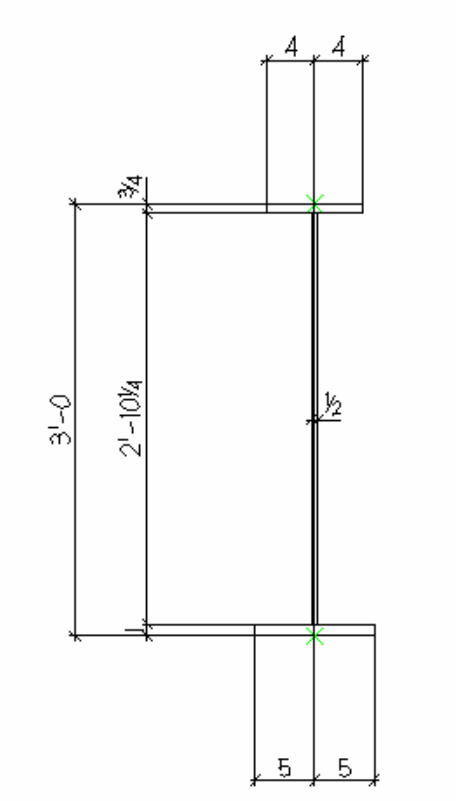
SSDCP Manual



Equal Plate Girder Example

If “no” is chosen, answer the following based on the slide
Dim. A – Top Flange plate width
Dim. B – Top Flange plate thickness
Dim. C – Bottom Flange plate width
Dim. D – Bottom Flange plate thickness
Dim. E – Total depth of girder
Dim. F – Web plate thickness

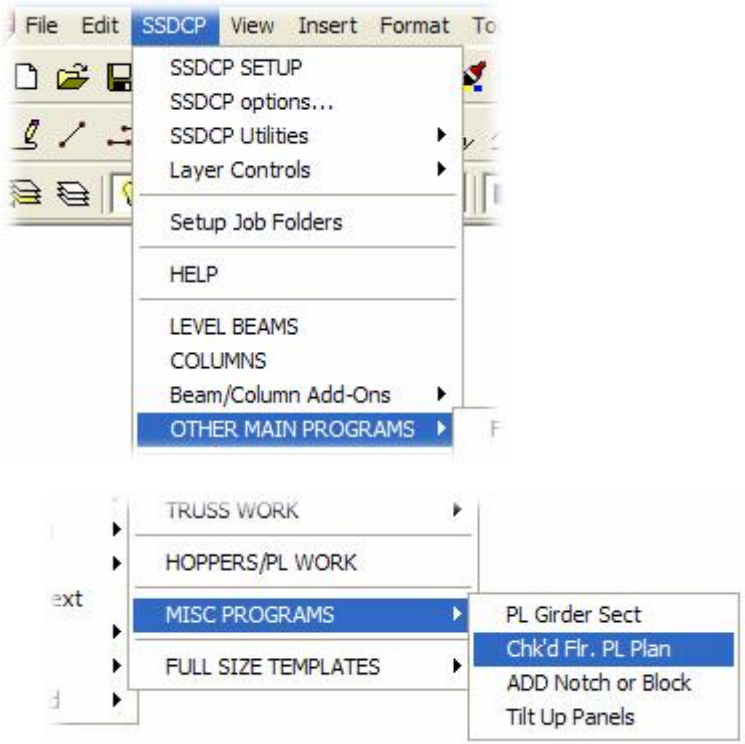
The last question will be “Do you want the girder dimensioned?”



Unequal Plate Girder Example

Checkered Floor Plate Plan

SSDCP Manual



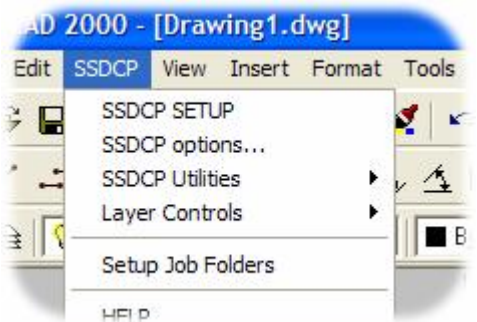
This program draws beam centerline's to scale. The checkered plate cannot be drawn to scale, as the edges of the plates would be too close together. When plotted, the lines could appear as one line. The user needs to pick a point to draw the edges of the plates if other than the "Standard Setback" of 1/8 or 3MM. The lines MUST be far enough apart to be clear to the shop. "Snap units" will be set to (1/2") (13 mm) to aid in locating the lines. The program will still give you the right size plate.

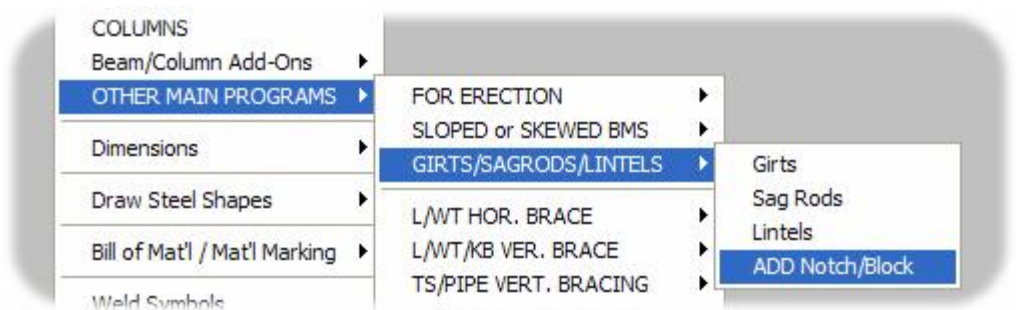
The total joint is (1/4") (6mm) wide where plates splice over beams. This program will not dimension this space. In the program this dimension is defaults to <1/8> <3 mm> from centerline of beams or reference dimensions. However, it will dimension all other conditions to the edges of the plates.

SSDCP Manual

Add Notch or Block

To add a cope (block)

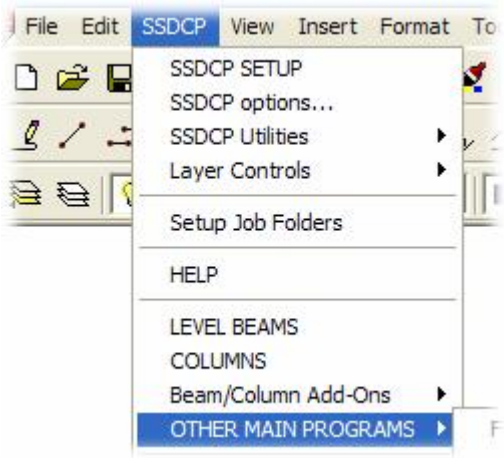


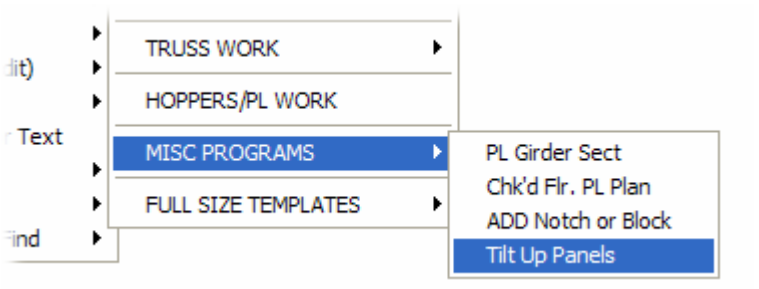


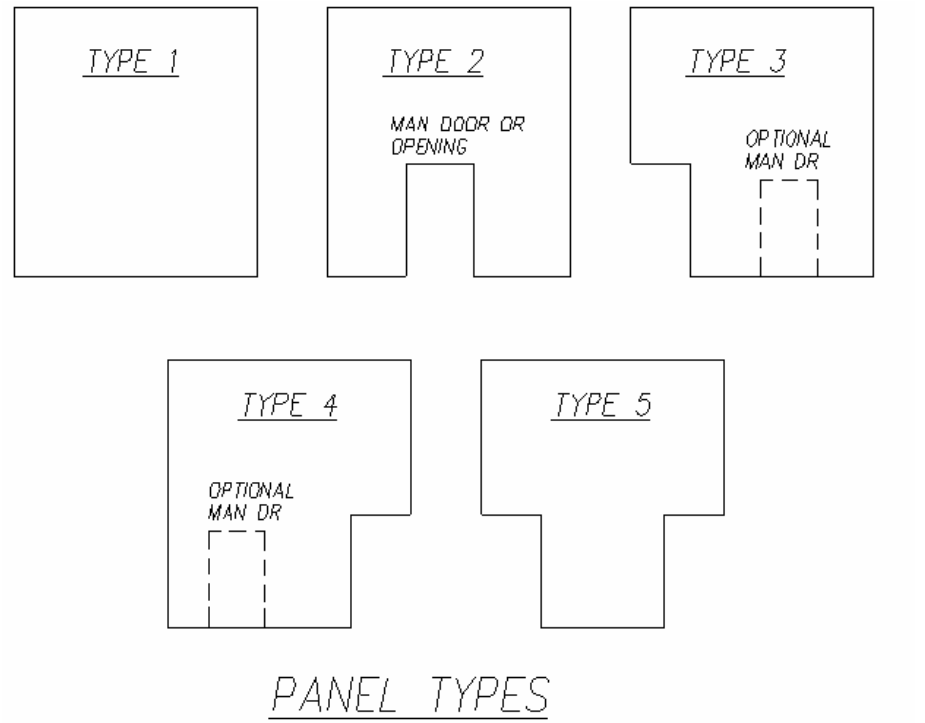
Note that you must already have at least two lines drawn forming a corner before this routine can be run.

1. Pick approximate location of cope
2. Enter cope length (for text label)
3. Enter cope depth (for text label)
4. Inside radius of cope (0= square corner)
5. Pick the intersecting corner
6. Drag line for cope length
7. Drag line for cope depth
8. Pick point to locate the text label for the cope
9. Cope is drawn, trimming all needed lines.

SSDCP Manual







Full Size Templates

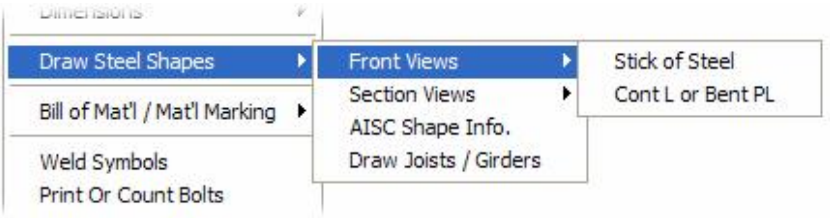
These programs will draw full size templates to scale for base plates, brace plates and wrap around plate. Input screens guide the user for input to draw the full-size template.

SSDCP Manual

Draw Steel Shapes

SSDCP Manual

Front Views



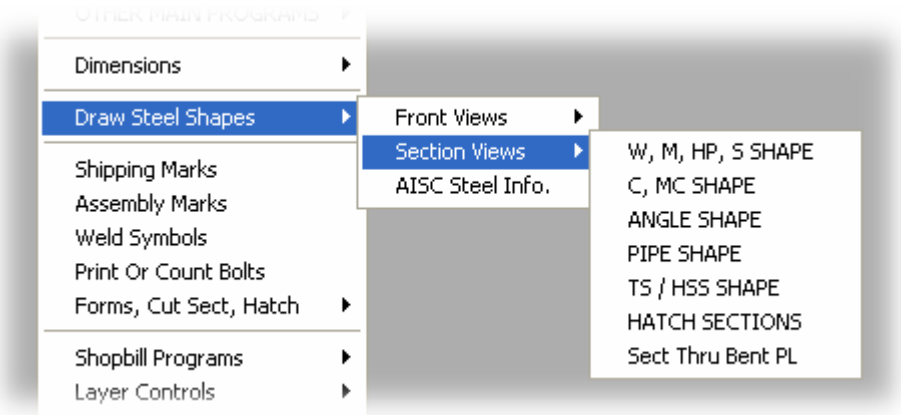
Stick of Steel

Allows the user to draw "pieces" of steel shapes

Continuous Angle or Bent Plate

Draw angle or plate by itself or add it to existing drawings

Section Views



W, M, HP, S Shape

1. Select shape from dialog box

4. Select stiffeners in the shape, if any
5. If yes, then choose NS, FS, or BS.
6. The routine will give the calculated dimension width of the stiffener. This can be overridden with a width of your own. (i.e. bar stock width)
7. Pick a point for plate size, and then place detail dimensions if needed.

C, MC Shape

1. Select shape from dialog box
2. Select orientation of channel
3. Place detail dimensions if needed.

PIPE Shape

1. Select shape from dialog box.
2. Pick point to place pipe

ANGLE Shape

1. Select shape from dialog box.
2. Select orientation of legs.
3. Add and dimension holes if necessary.

TS, HSS Shape

1. Select shape from dialog box.
2. Pick point to place tube

Section Hatch

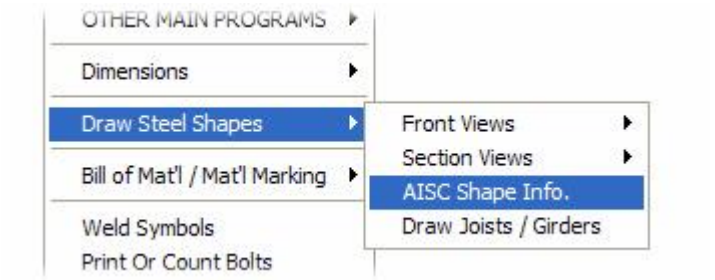
Allows the user to add hatching to a section of steel

Section Thru Bent Plate

This routine will draw section of bent plate per the user defined dimensions

SSDCP Manual

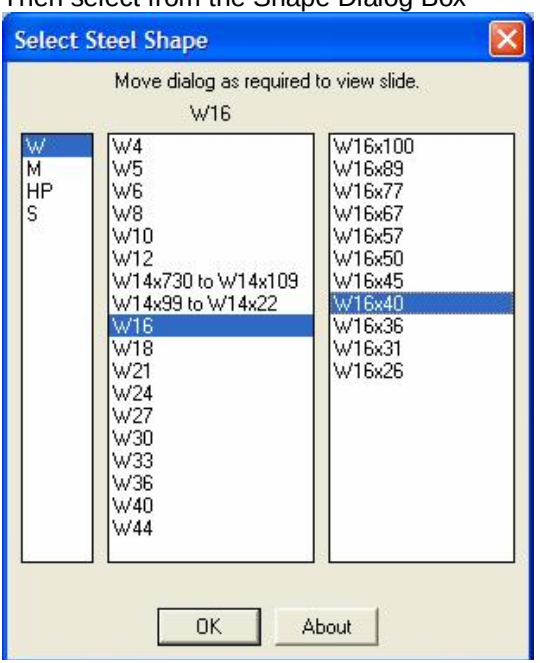
AISC Shape Information



Select from the following:

1. W, M, HP or S shape
2. Channel
3. Pipe

Then select from the Shape Dialog Box

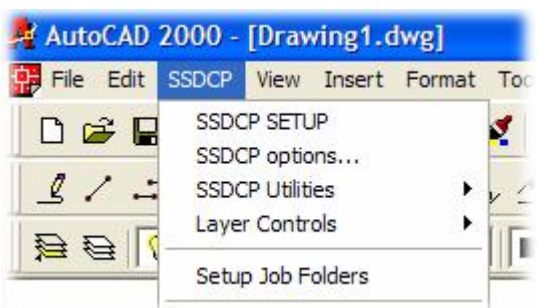


SSDCP Manual

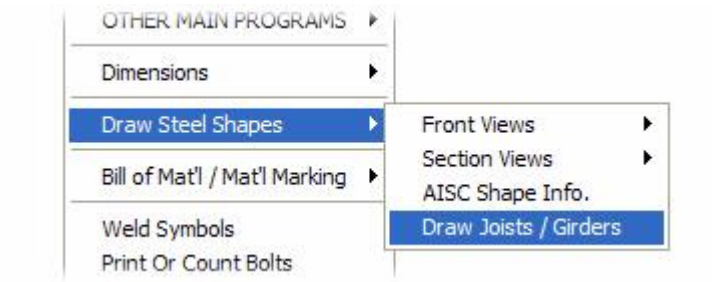
W27x94
DEPTH = 2'-2⅞
1/2 DEPTH = 1'-1⅞₁₆
FLANGE WIDTH = 10
FLANGE THKS. = ¾
WEB THICKNESS = ½
"C" DISTANCE = 5/16
"K" DISTANCE = 1⅝
FLANGE GAGE = 5½
STIFFENER SIZE = 4¾ x 2'-1⅜
BLOCK SIZE = 5¼ x 1¾
DIM. FROM TOP OF BEAM TO BTM. "K" DIST = 2'-1¼

Draw Joist / Girders

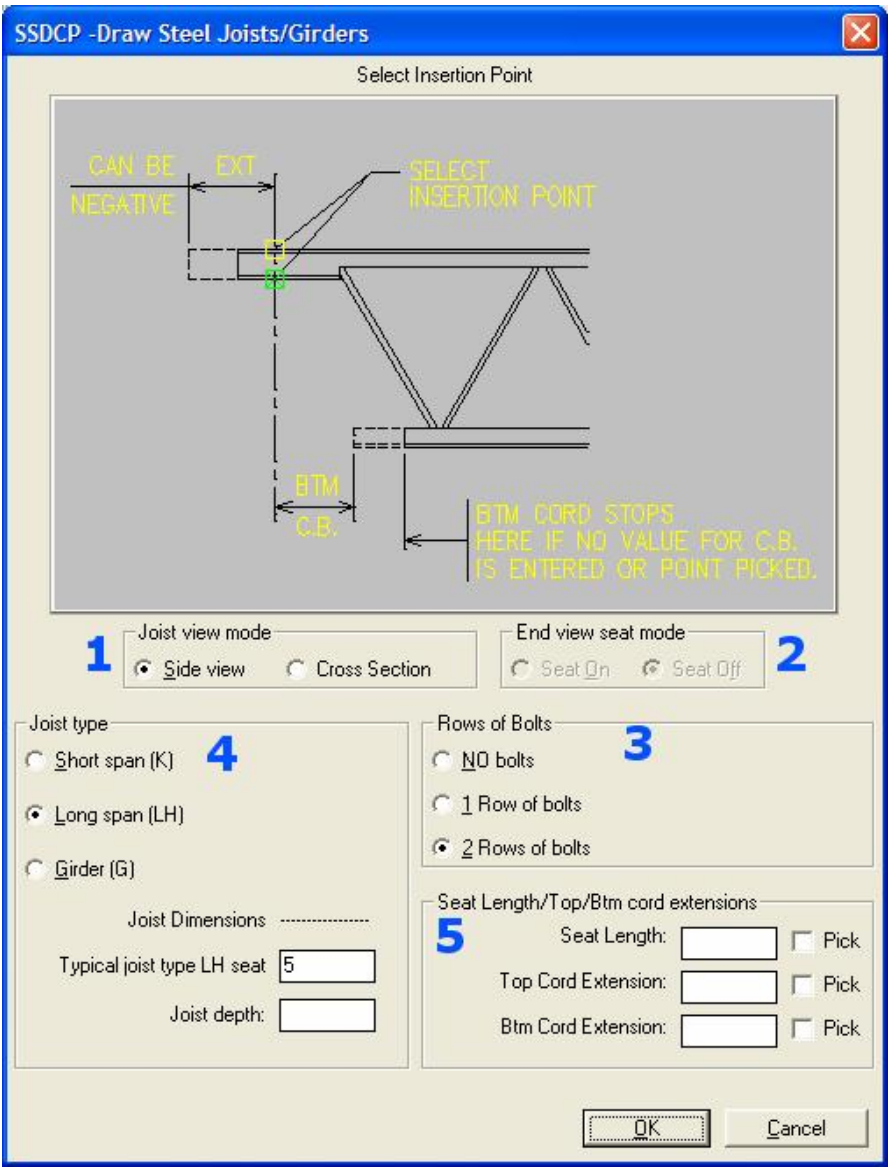
Select SSDCP **à** Draw Steel Shapes **à** Draw Joist/Girders



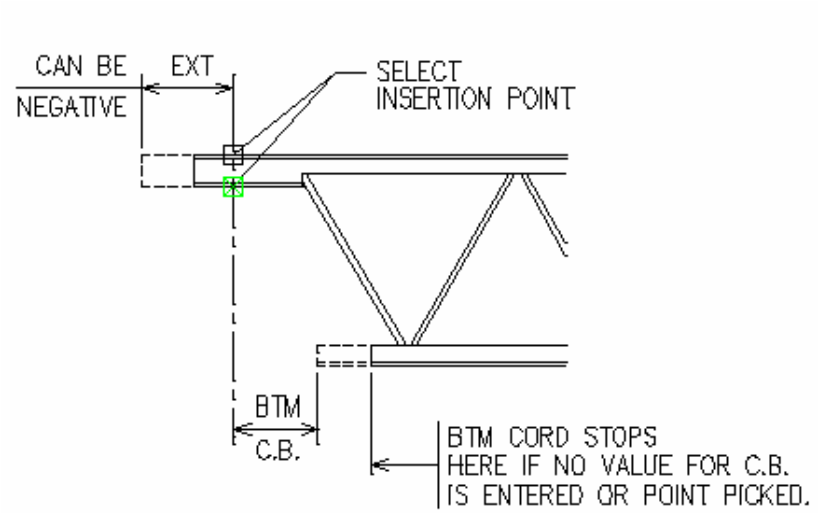
SSDCP Manual



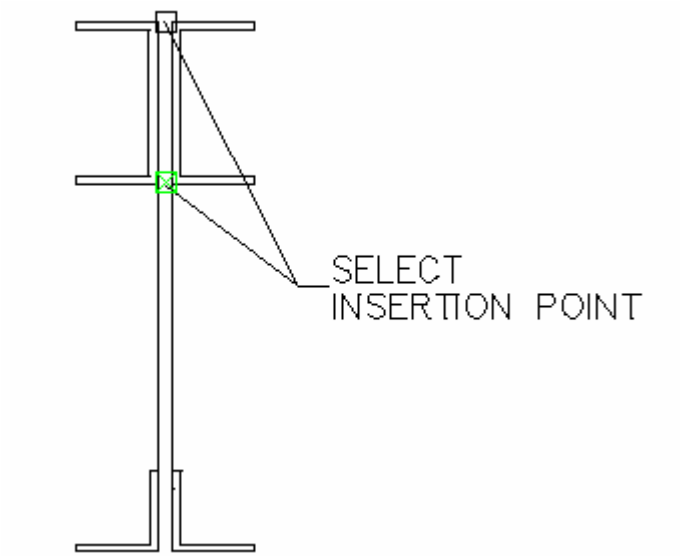
SSDCP Manual



1. Joist View Mode

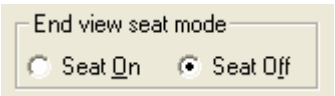


If cross section is selected



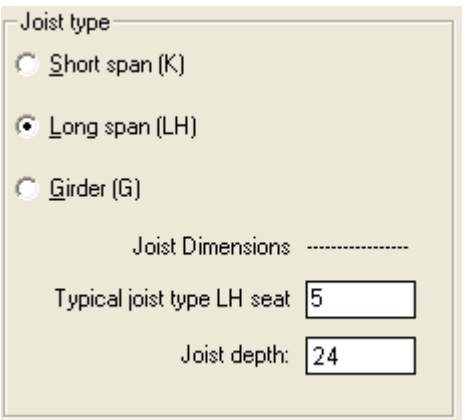
SSDCP Manual

2. End View Seat Mode



In cross section view mode only, selecting “Seat On” shows the seat and “Seat Off” shows only top and bottom chords.

3. Joist Type



Choose Short span, Long span or Girder.

The typical joist seat depth will change as the selection changes.

Joist (or Girder) depth is required.

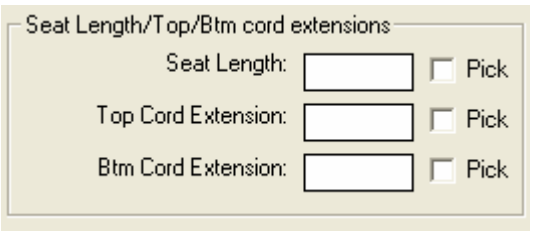
4. Rows of Bolts



Enter the number of rows of bolts

This is only active during “side view” mode.

5. Joist Seat Length, Top & Bottom Chord Extensions

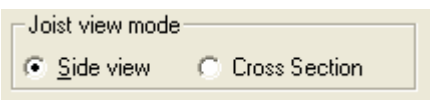


Enter seat length, top or bottom chord extensions as needed.

Alternatively, you can check the “pick” box and pick the locations as the joist is drawn.

This is only active during “side view” mode.

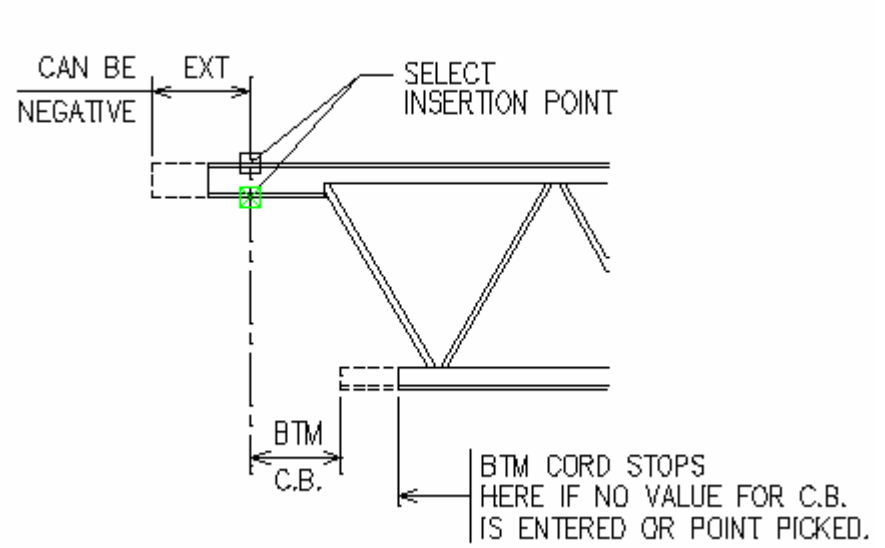
Joist View Mode



This determines how the joist will be drawn.

SSDCP Manual

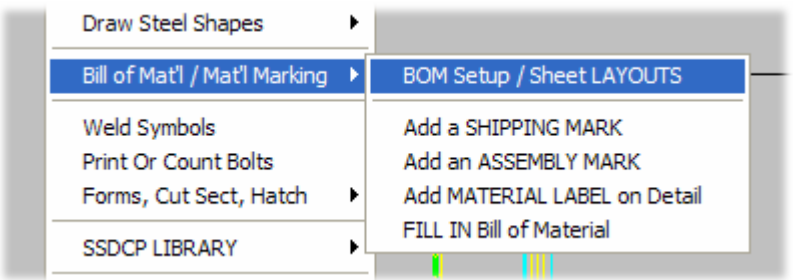
Selection of “Side view”



BOM & Material Marking

SSDCP Manual

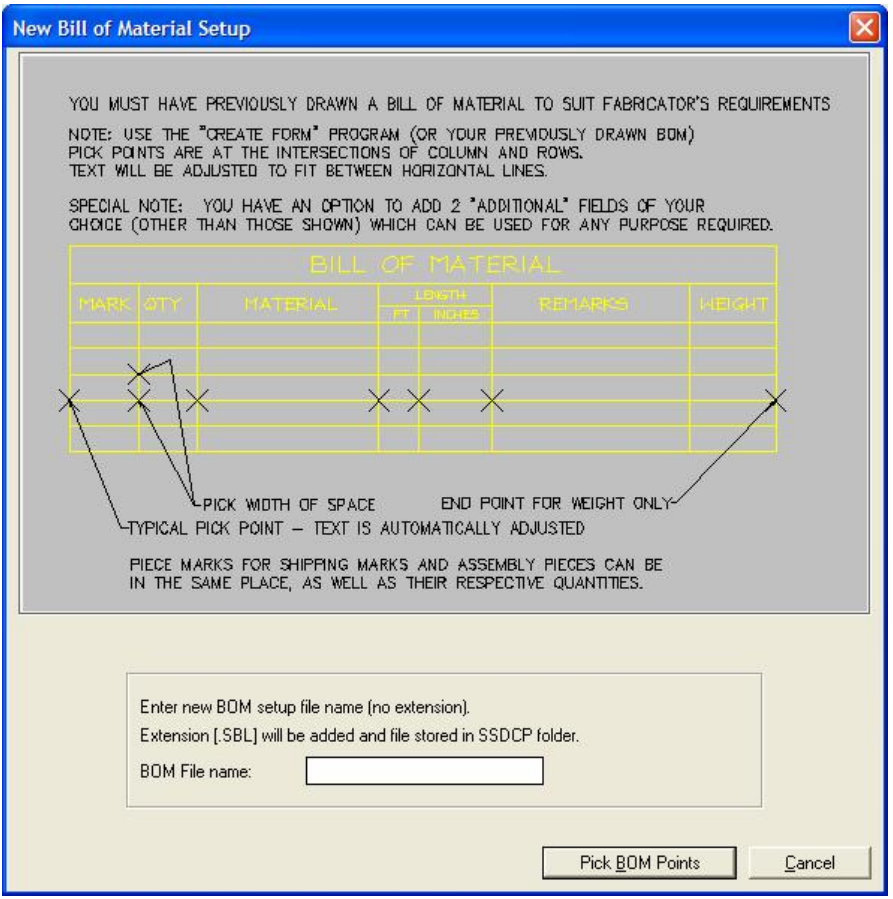
BOM Setup/Sheet Layouts


Draw Steel Shapes
Bill of Mat'l / Mat'l Marking
Weld Symbols
Print Or Count Bolts
Forms, Cut Sect, Hatch
SSDCP LIBRARY
BOM Setup / Sheet LAYOUTS
Add a SHIPPING MARK
Add an ASSEMBLY MARK
Add MATERIAL LABEL on Detail
FILL IN Bill of Material

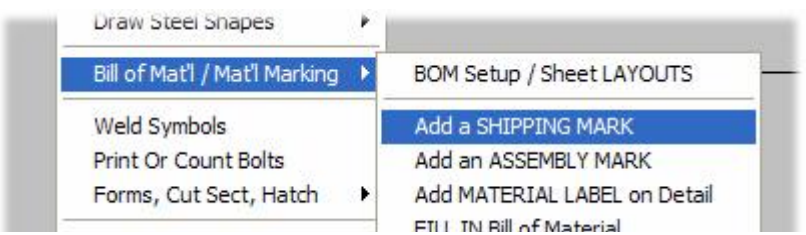
In order to setup a Bill of Material (BOM), the BOM needs to be drawn already. SSDCP's Create Form can be used or a previously drawn BOM within AutoCAD.

First, add the BOM File name in the text box. Only enter the name of the file, the extension will be added automatically. Then after zooming to the BOM, SSDCP will ask for the user to pick points where each entry is required. It will ask for the user to pick points to determine height between lines.

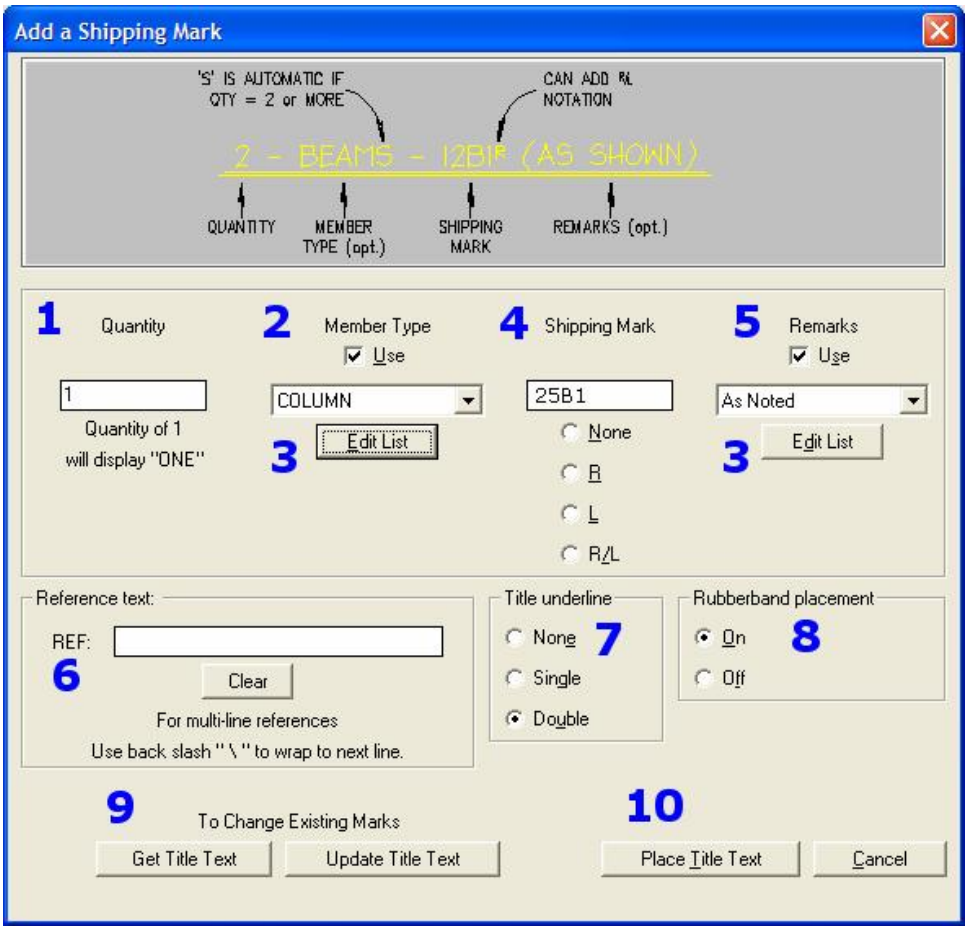
SSDCP Manual


New Bill of Material Setup
YOU MUST HAVE PREVIOUSLY DRAWN A BILL OF MATERIAL TO SUIT FABRICATOR'S REQUIREMENTS
NOTE: USE THE "CREATE FORM" PROGRAM (OR YOUR PREVIOUSLY DRAWN BOM)
PICK POINTS ARE AT THE INTERSECTIONS OF COLUMN AND ROWS.
TEXT WILL BE ADJUSTED TO FIT BETWEEN HORIZONTAL LINES.
SPECIAL NOTE: YOU HAVE AN OPTION TO ADD 2 "ADDITIONAL" FIELDS OF YOUR
CHOICE (OTHER THAN THOSE SHOWN) WHICH CAN BE USED FOR ANY PURPOSE REQUIRED.
BILL OF MATERIAL
MARK
QTY
MATERIAL
LENGTH
FT
INCHES
REMARKS
WEIGHT
PICK WIDTH OF SPACE
END POINT FOR WEIGHT ONLY
TYPICAL PICK POINT – TEXT IS AUTOMATICALLY ADJUSTED
PIECE MARKS FOR SHIPPING MARKS AND ASSEMBLY PIECES CAN BE
IN THE SAME PLACE, AS WELL AS THEIR RESPECTIVE QUANTITIES.
Enter new BOM setup file name (no extension).
Extension [.SBL] will be added and file stored in SSDCP folder.
BOM File name:
Pick BOM Points
Cancel

Add a Shipping Mark


Draw Steel Shapes
Bill of Mat'l / Mat'l Marking
Weld Symbols
Print Or Count Bolts
Forms, Cut Sect, Hatch
BOM Setup / Sheet LAYOUTS
Add a SHIPPING MARK
Add an ASSEMBLY MARK
Add MATERIAL LABEL on Detail

SSDCP Manual



1. Quantity - Add quantity needed. Typing "1" will print "ONE".

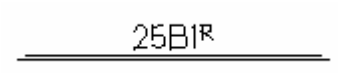
2. Member Type - Use the dropdown box to choose the member type to print.
If the list does not have the type listed, it can be added to the list so it will be there for future use by clicking on “Edit List”.

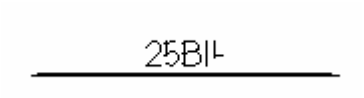
3. Edit List - Any text may be added to the list box by typing in the textbox and clicking “Add”. The order of items

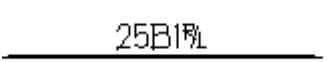
SSDCP Manual

4. Shipping Mark – Add the shipping mark in the textbox. The following choices will print text as follows:

None 

R 

L 

R/L 

5. Remarks - Choose any remark if needed. If no remark is needed, make sure the "use" checkbox is unchecked. If any remark not in the list is needed, it can be added for future use by clicking on “Edit List”.

6. Reference Text - This text will be printed under your title. Add text in the textbox for anything to be printed as a reference guide for checkers, notes, etc.
Use the back slash “\” to wrap text and force text to be written on a new line.
This routine remembers what was used last, so text may need to be cleared or edited. In order to clear the box, click on clear.
In order to edit, click the cursor in the textbox and edit any text.

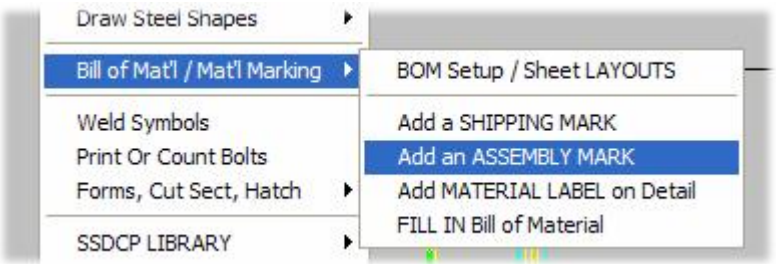
7. Title Underline - Draws one line, two lines or no line under your title text.

8. Rubberband Placement - ON will allow text to be placed using “rubberband” placement with the starting point being the midpoint of the previous shipping mark entry and placement.

9. Change Existing Marks – In order to edit an existing mark already on the detail sheet, click on “Get Title Text”. Select the shipping mark to be edited. This will fill the mark in dialog box and allow any changes desired. After all changes are done, click on “Update Title Text” and the shipping mark on the detail will change to the updated text.

SSDCP Manual

Add an Assembly Mark


Draw Steel Shapes
Bill of Mat'l / Mat'l Marking
Weld Symbols
Print Or Count Bolts
Forms, Cut Sect, Hatch
SSDCP LIBRARY
BOM Setup / Sheet LAYOUTS
Add a SHIPPING MARK
Add an ASSEMBLY MARK
Add MATERIAL LABEL on Detail
FILL IN Bill of Material

This routine will add assembly marks to details. There are three types of marking choices.

1. Upper Case Letters – example 2-B18

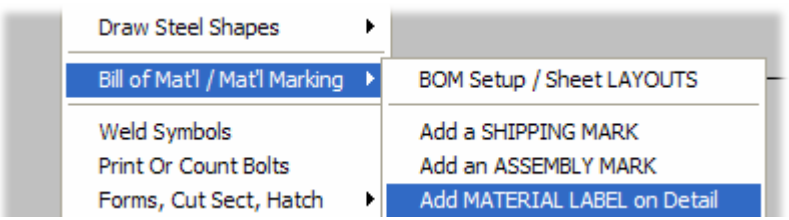
2. Lower Case Letters – example 2-b18

3. Material Type with lower case Letters – example 2-aa18
   Routine uses “a” for angle, “p” for plate, “b” for bar, and “mc” for misc.

Options include adding OSG (outstanding leg gage) or notes. Built in choices for notes are NS, FS, NS/FS, CNTR, TYP, SHOP BOLT and Other. Selecting “other” allows for adding any note desired. (i.e. TYP UNO).

Letters NOT USED are I, J, L, O, Q, U, X and Z. Sheet numbers are optional and the routine will auto-increment piece mark letters.

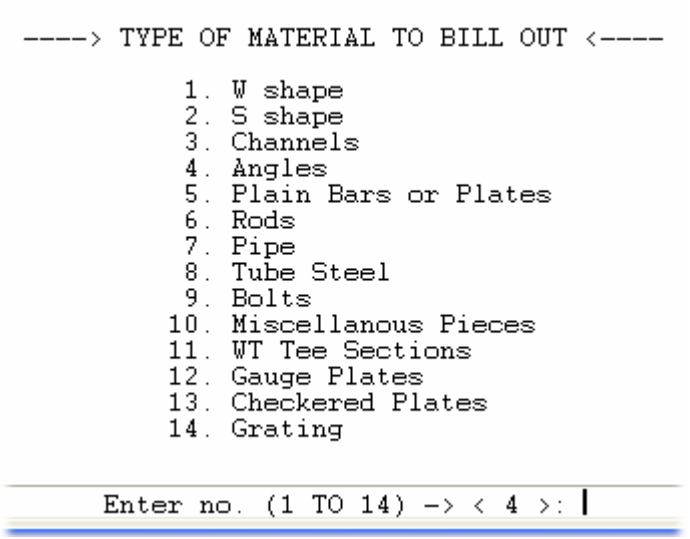
Add Material Label on Detail


Draw Steel Shapes
Bill of Mat'l / Mat'l Marking
Weld Symbols
Print Or Count Bolts
Forms, Cut Sect, Hatch
BOM Setup / Sheet LAYOUTS
Add a SHIPPING MARK
Add an ASSEMBLY MARK
Add MATERIAL LABEL on Detail

SSDCP Manual

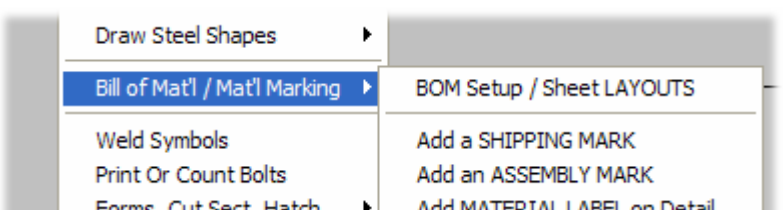
This routine will place text and piece marks on details for use in filling out the bill of material.

1. Will ask for quantity of assembly pieces
2. User chooses type of material



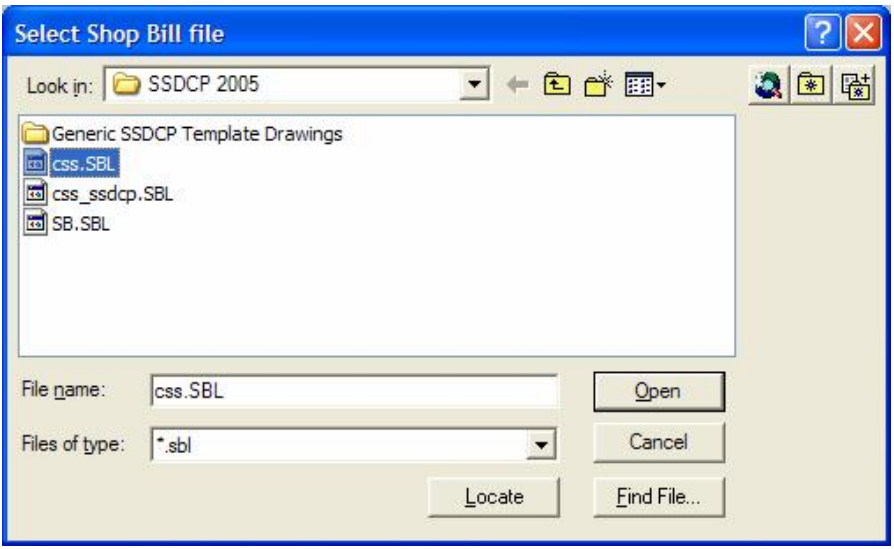
3. Questions asked for the material label are different based on the choice of material.
4. User can add an assembly piece mark, if desired.
5. If assembly mark is selected, user can add R or L to the piece mark.
6. User has option of selecting the starting point or ending point of text.
7. Zoom box allows user to “zoom in” to area that label is to be added. The zoom box can be sized by pressing the “I” (increase) or “D” (decrease) key.

Fill In Bill of Material

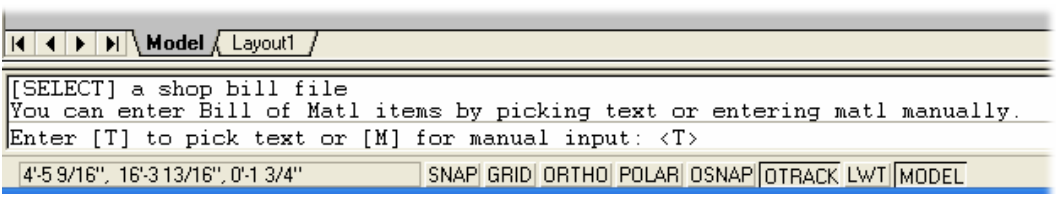

Draw Steel Shapes
Bill of Mat'l / Mat'l Marking
Weld Symbols
Print Or Count Bolts
BOM Setup / Sheet LAYOUTS
Add a SHIPPING MARK
Add an ASSEMBLY MARK

SSDCP Manual

If this is the first run of this routine during your AutoCAD session, the routine will ask for selection of the bill of material (BOM). Choose the BOM file that is needed for the fabricator.



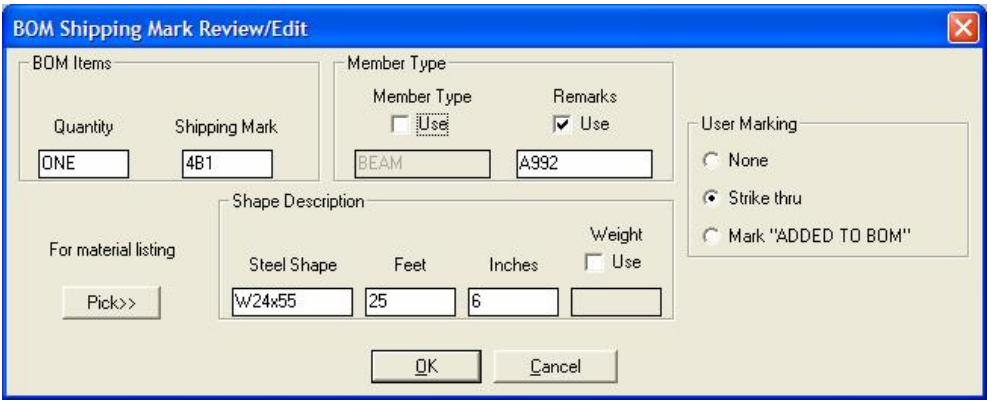
The program will ask if you wish to fill the BOM automatically or manually. If you choose [M] for manual input, the program will guide you through questions to fill out the BOM.



If you choose [T] to pick text, the bill of material can be filled in by selecting material labels. Note that in order to use this routine to automatically fill in a BOM, material labels must exist so that they may be picked. Text cannot be added by the user and then be readable by this routine, the material label must have been placed by the program or by the user, using the “Add Material Label on Detail” routine.

The choice is to add either [S] Shipping Mark or [A] Assembly Mark.

SSDCP Manual



The fields that the dialog can read from the material label are automatically filled in. These can be changed to anything that is needed. When it first reads the material label, the shape and ft-in dimensions are not filled in. Click on “Pick” to find and pick that material. The fields will then be filled in based on the label information. By checking the “Use” box, the user can choose to have the member type in the BOM before the main material listing. Place a checkmark above the fields that are to be filled in the BOM automatically. The user marking system allows the user to leave shipping marks alone by choosing “None”, having a line thru the selected mark; “Strike Thru” or “Added to BOM” written over top of the mark.

Zoom box allows user to “zoom in” to area that label is to be added. The zoom box can be sized by pressing the “I” (increase) or “D” (decrease) key.

If Assembly Mark is selected:



SSDCP Manual

The fields that the dialog can read from the material label are automatically filled in. These can be changed to anything that is needed. The user needs to click on the material and the piece mark (if any). When it first reads the material label, the shape, the ft-in dimensions, quantity and piece mark (if used) are filled in. If there are other material the same mark and size, click on “Pick for Duplicate” to find and pick that material. The quantity will automatically change to the additional quantity. The user can choose to have the material label replaced with the piece mark only. Place a checkmark above the weight field if the weight is to be printed in the BOM. The user marking system allows the user to leave shipping marks alone by choosing “None”, having a line thru the selected mark; “Strike Thru” or “Added to BOM” written over top of the mark.

Zoom box allows user to “zoom in” to area that label is to be added. The zoom box can be sized by pressing the “I” (increase) or “D” (decrease) key.

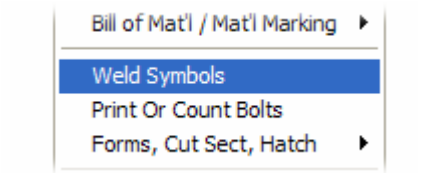
SSDCP Manual

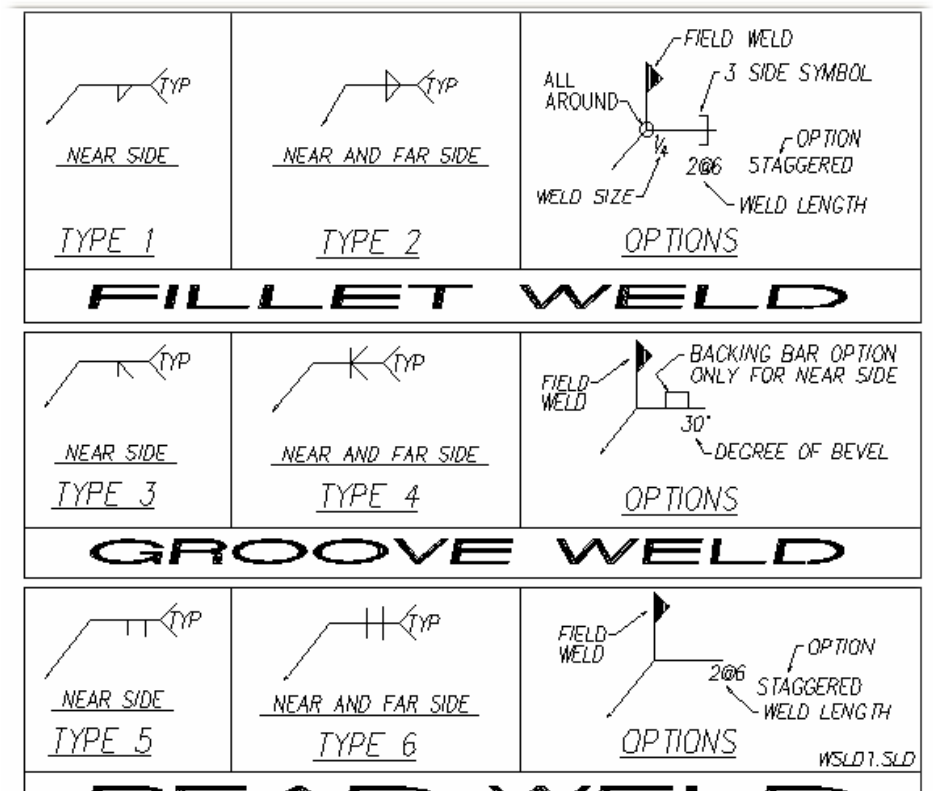
Weld Symbols

SSDCP Manual

Weld Symbols

This routine allows the user to add weld symbols thru answering a few questions and picking the location of the weld symbols on the detail. Weld size, length, notes and field weld are all options.





SSDCP Manual

Print or Count Bolts

The user can count bolts by clicking on the “green” bolt text label. The same lengths must be picked each time until all bolts are counted. Then the next length can be counted as so on until all lengths are counted and printed on the sheet.

Forms, Cut Section Arrows, Hatch Patterns

Create any Form

This routine aids in drawing any form such as a lintel schedule, bill of material (BOM) by allowing the user to answer questions to create the lies needed for the form. Enter number of rows and columns using “real world” dimensions.

Cut Section Arrows

This routine will cut section arrows with user input for direction and text.

Standard Hatch Patterns

This routine will draw the following hatch patterns on an object or items selected by a boundary box.

- Steel
- Concrete
- Wall 1/8” Scale
- Wall 1” Scale
- Grating-Bearing Bars Horizontal
- Grating-Bearing Bars Vertical
- Checkered Plate

SSDCP Manual



SSDCP Manual

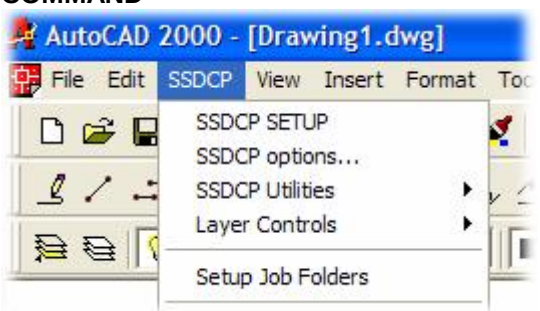
SSDCP Library

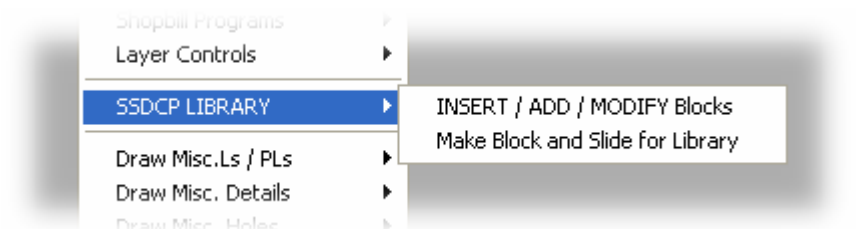
Insert / Add / Modify Blocks

Make Block and Slide For Library

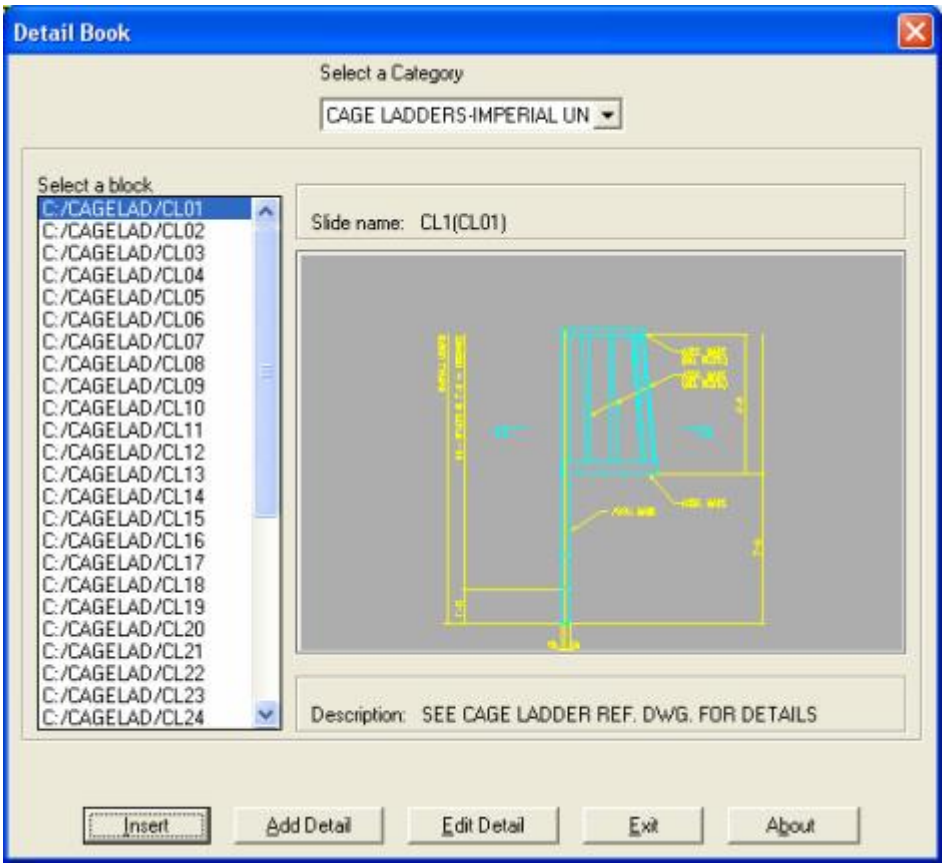
This program will allow you to catalog and create a library for blocks. These dialogue boxes pertaining to the program are for making blocks and slides on the fly. These boxes work with the LISP program that will help you make a block and generate slides. The calls for these programs are found in the pull down under SSDCP LIBRARY. If you do not make a slide of the block, it can still be inserted on your drawing but there will be no picture in the image area of the box. The category name is **case sensitive**. The names of all blocks and slides are in the file SSDCP.DBK

COMMAND





SSDCP Manual

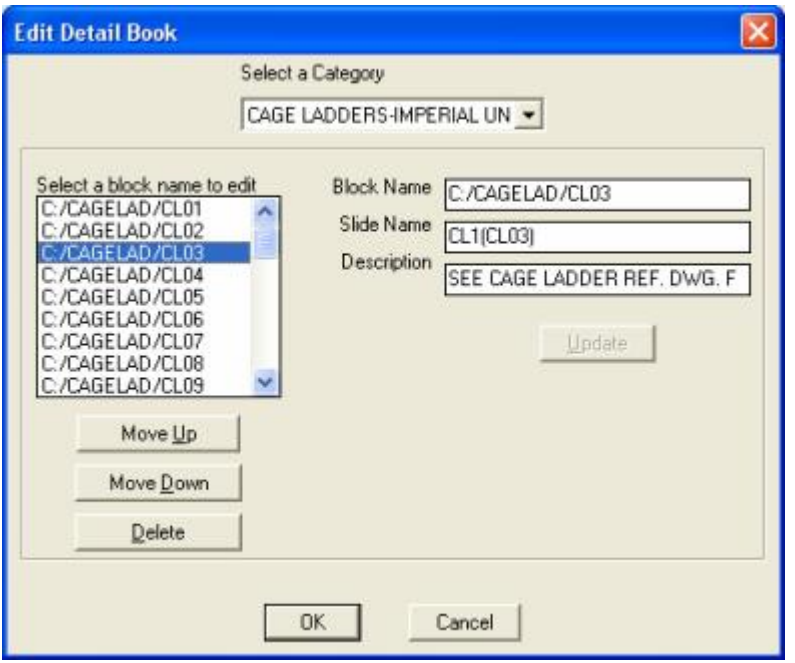


The main dialogue box is used to insert an existing block, add a new block, or edit an existing block.



SSDCP Manual

The "add to" dialogue box lets you set up a new category and add blocks you have made.



The edit blocks dialogue box lets you sort the block by moving up or moving down or delete blocks that you want to remove.

SSDCP Manual

Miscellaneous Blocks

× INDICATES INSERTION POINTS (USE INSERT COMMAND)

DETAILERS NOTE: SEE DRAWING ICONS UNDER SSDCP PULLDOWN FOR ADDITIONAL MISC. DRAWINGS IF PURCHASED.

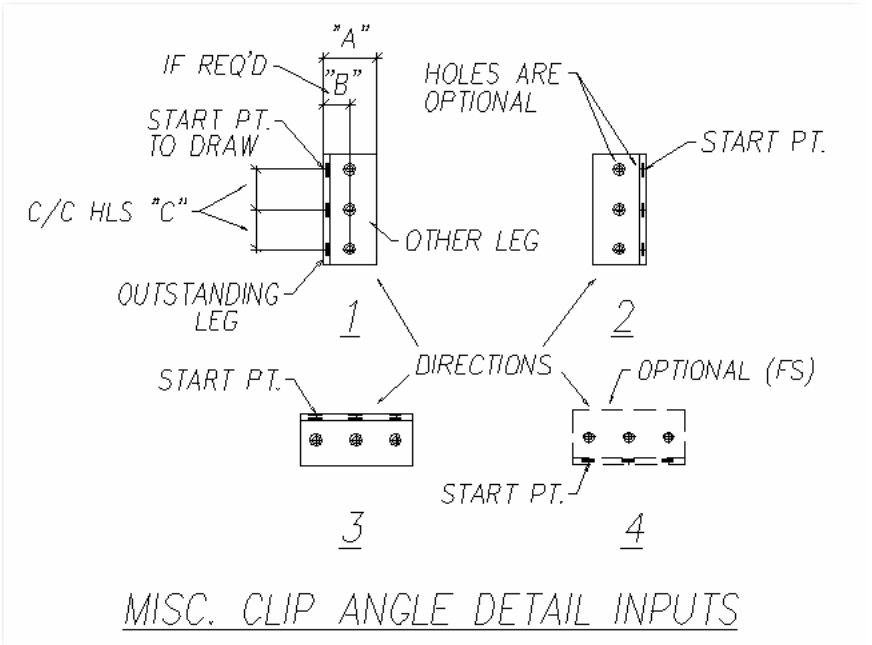
BLOCK NAME	PICTURE	DESCRIPTION
FH38 FH12 FH58 FH34 FH78	 0 DEG. −90 DEG	QUICK FLANGE HL FOR 3/8" TO 7/8" THICKNESS OF MATERIAL IN 1/8 INCREMENTS
CNTR		CENTER LINE INDICATOR
R		RIGHT INDICATOR FOR ASSEMBLE MARKS TEXT IS SMALLER THAN NORMAL (EX. PA^{R})
L		LEFT INDICATOR FOR ASSEMBLE MARKS TEXT IS SMALLER THAN NORMAL
RL		RIGHT & LEFT INDICATOR FOR ASSEMBLE MARKS TEXT IS SMALLER THAN NORMAL
ARROW	 IP	LARGE POINTING ARROW (WILL MAKE SOLID IF FILLMODE IS SET TO 1) ROTATE TO SUIT
HAND		POINTING HAND (ROTATE OR MIRROW TO SUIT)
APR	 IP	QUICK HATCH MARK FOR DIMENSION LINE
SECT1		QUICK SECTION INDICATOR

Miscellaneous Angles/Plates

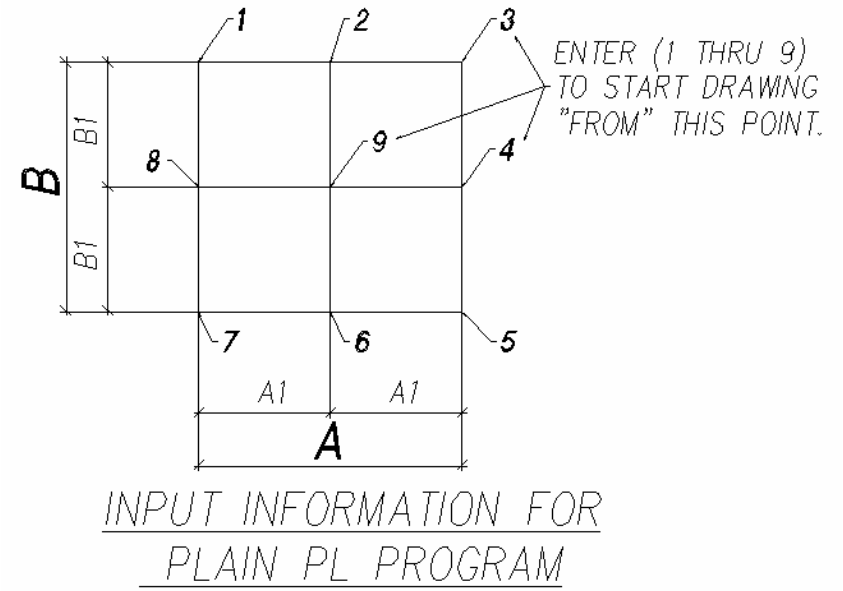
Draw Miscellaneous Angles / Plates

These routines will draw miscellaneous angles and plates by inputting dimensions from slides shown on screen.

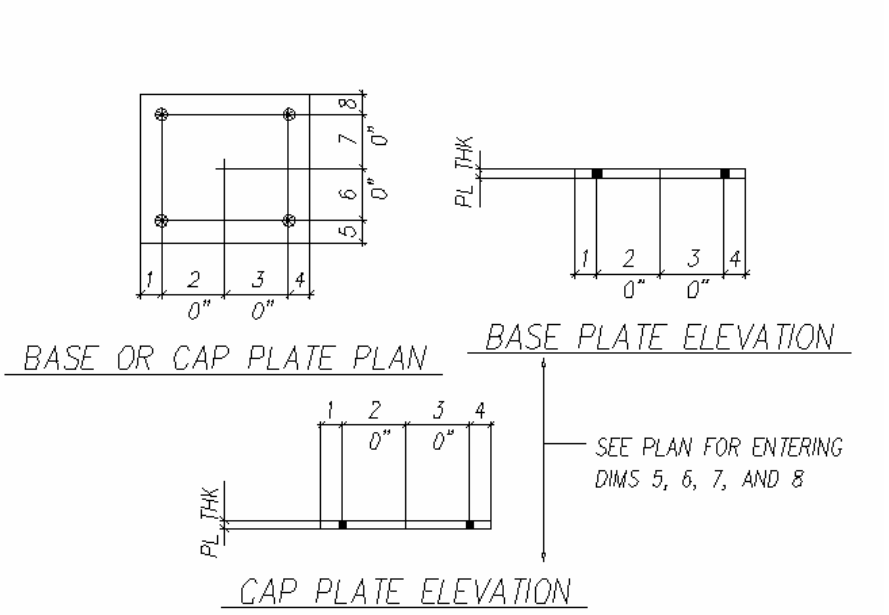
Clip Angle



Any Plain Plate

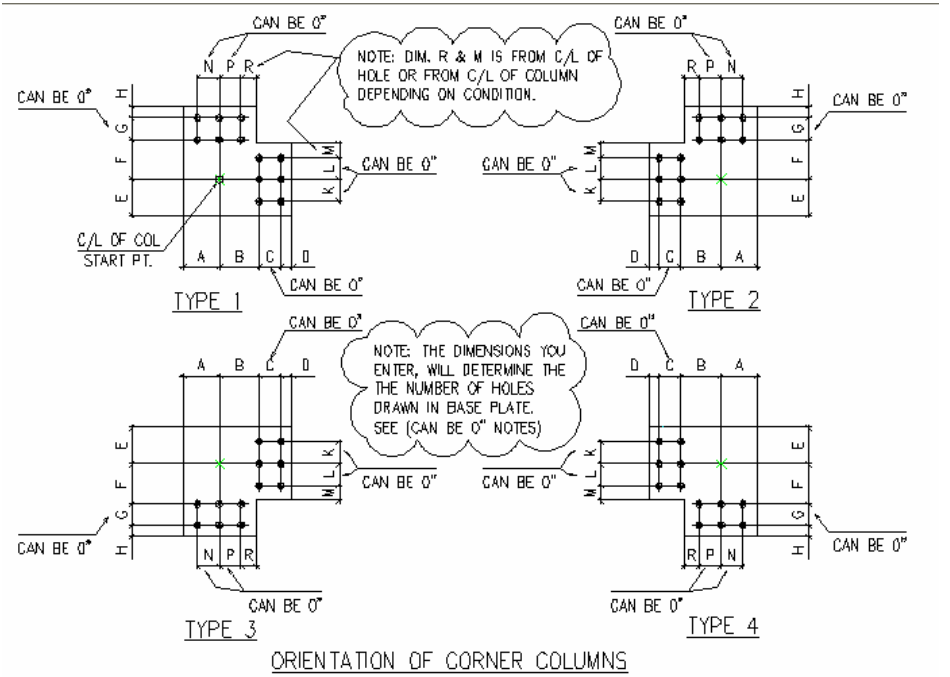


Base Plate Plan
Base Plate Elevation
Cap Plate Elevation


8
7
6
5
0"
0"
1
2
3
4
0"
0"
BASE OR CAP PLATE PLAN
PL THK
1
2
3
4
0"
0"
BASE PLATE ELEVATION
1
2
3
4
0"
0"
PL THK
SEE PLAN FOR ENTERING
DIMS 5, 6, 7, AND 8
CAP PLATE ELEVATION

SSDCP Manual

Corner Base Plate


CAN BE 0"
NOTE: DIM. R & M IS FROM C/L OF HOLE OR FROM C/L OF COLUMN DEPENDING ON CONDITION.
C/L OF COL START PT.
TYPE 1
TYPE 2
NOTE: THE DIMENSIONS YOU ENTER, WILL DETERMINE THE THE NUMBER OF HOLES DRAWN IN BASE PLATE. SEE (CAN BE 0" NOTES)
TYPE 3
TYPE 4

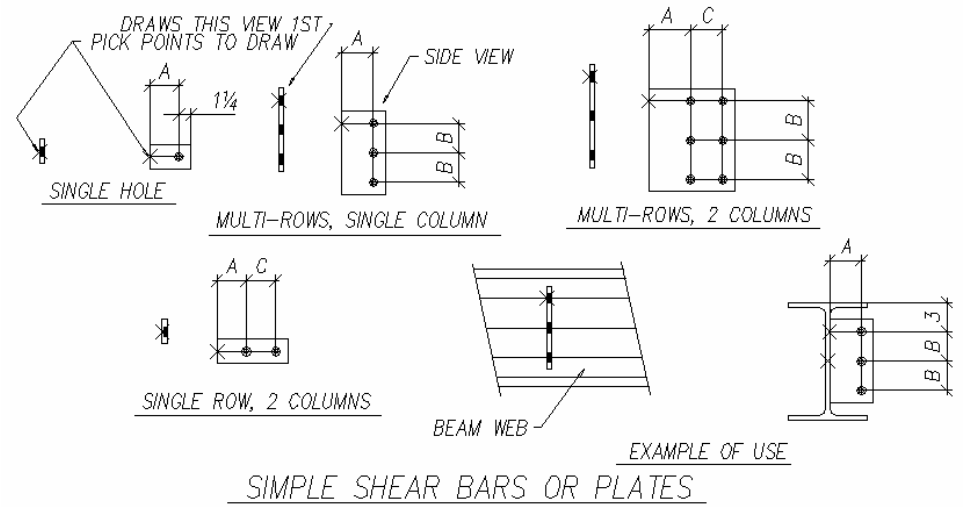
ORIENTATION OF CORNER COLUMNS

Dimension Any Plate

this routine will dimension any plate that has already been drawn

SSDCP Manual

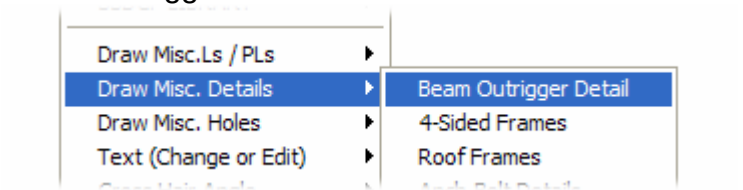
Shear Bars

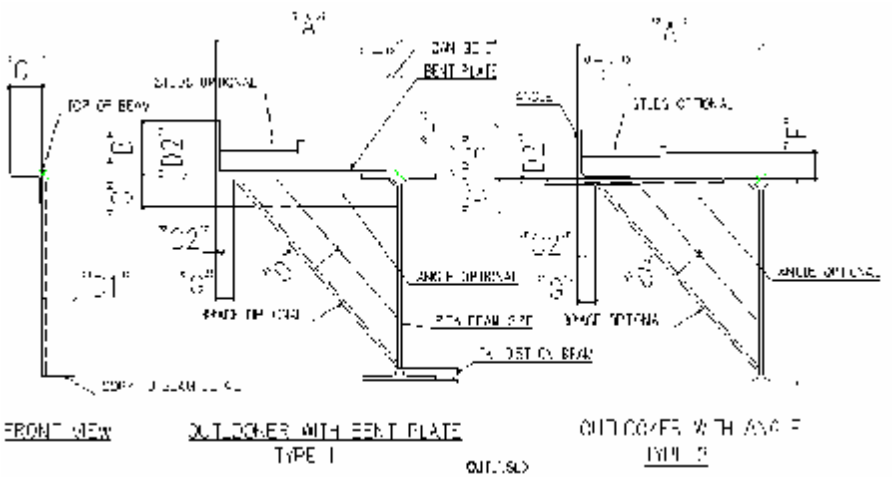



Miscellaneous
Details

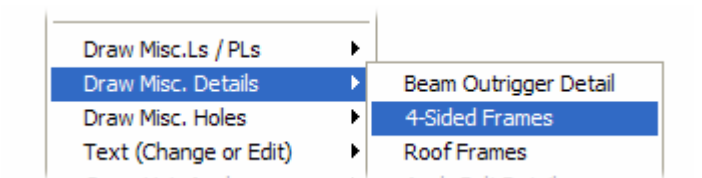
Draw Miscellaneous Details

Beam Outrigger Detail

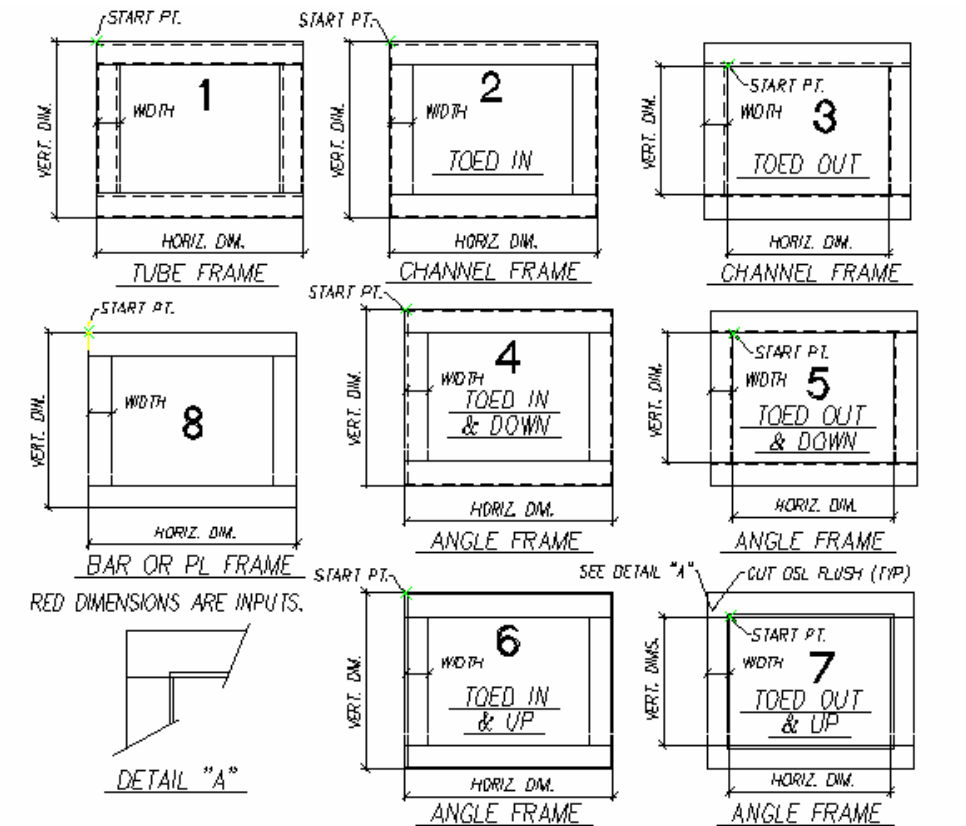




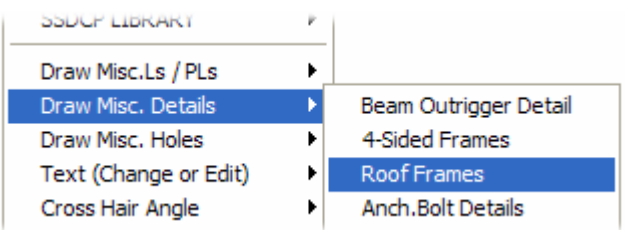
4-Sided Frames



SSDCP Manual

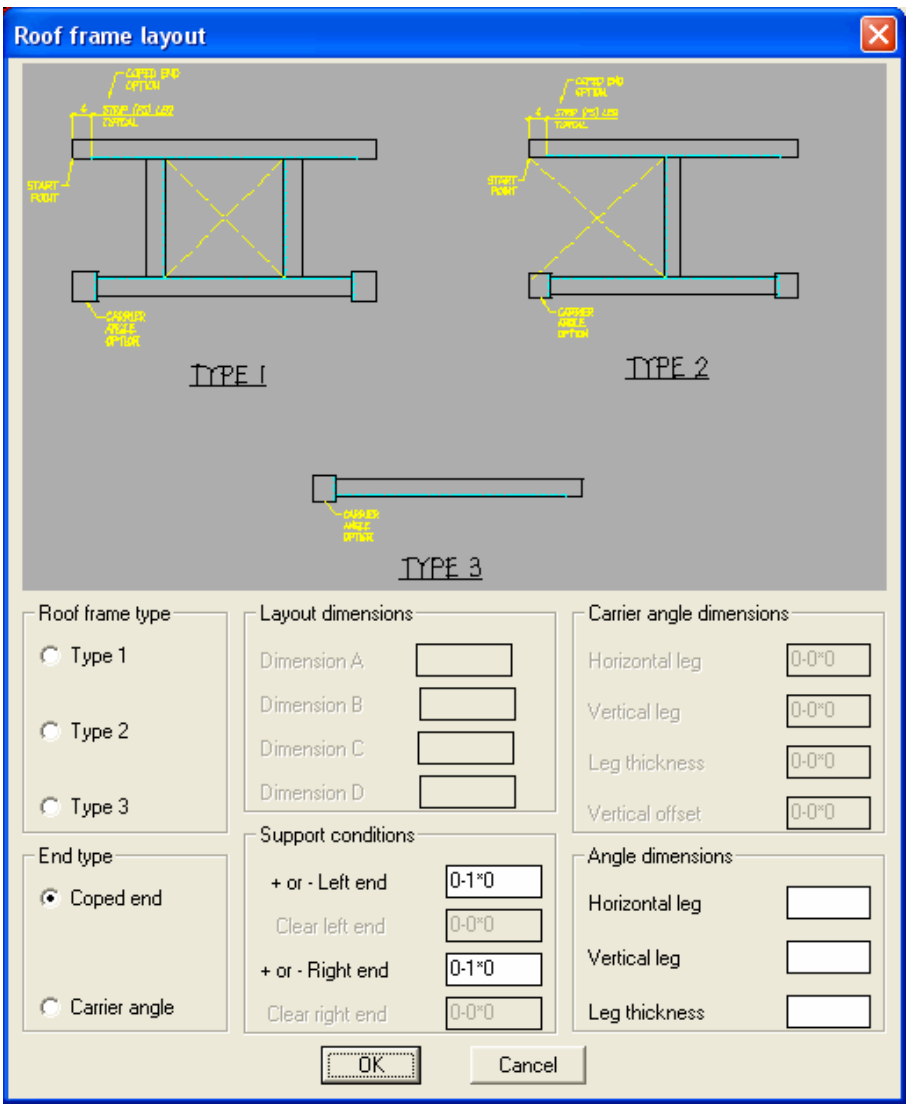


Roof Frames



SSDCP Manual

The roof frame program will give you a visual slide of the types of roof frames that SSDCP supports. The main dialog box has three types to choose from. The program only supports angle roof frames.



Type 3 – Header angle (can have a coped end or use a carrier angle)
Note that with each type a new slide will be shown in the dialog box with the corresponding dimensions that need to be entered.

End Type

Coped end – this option will strip the vertical leg 4". This is the default value, if you need to change it, you'll need to change it after the frame has been drawn.
Carrier Angle – the carrier angle is a seat angle that bears on a beam flange or joist top chords. You control the size of this angle within the dialog box.

Layout Dimensions

There are four textboxes that may or may not be used depending on the type of roof frame selected. Dimension "A" is always the center-to-center dimension of the supports. Dimensions B, C and D vary depending upon frame chosen and may not be required.

Support Conditions

If you choose to use a coped end, the support conditions box will need a plus(+) or minus(-) dimension on each end from the centerline of your supports. Can be zero (0)

When you choose to use a carrier angle for your ends, the support conditions area of the dialog box will need a clear dimension from the support centerline on each end.

Carrier angle dimensions

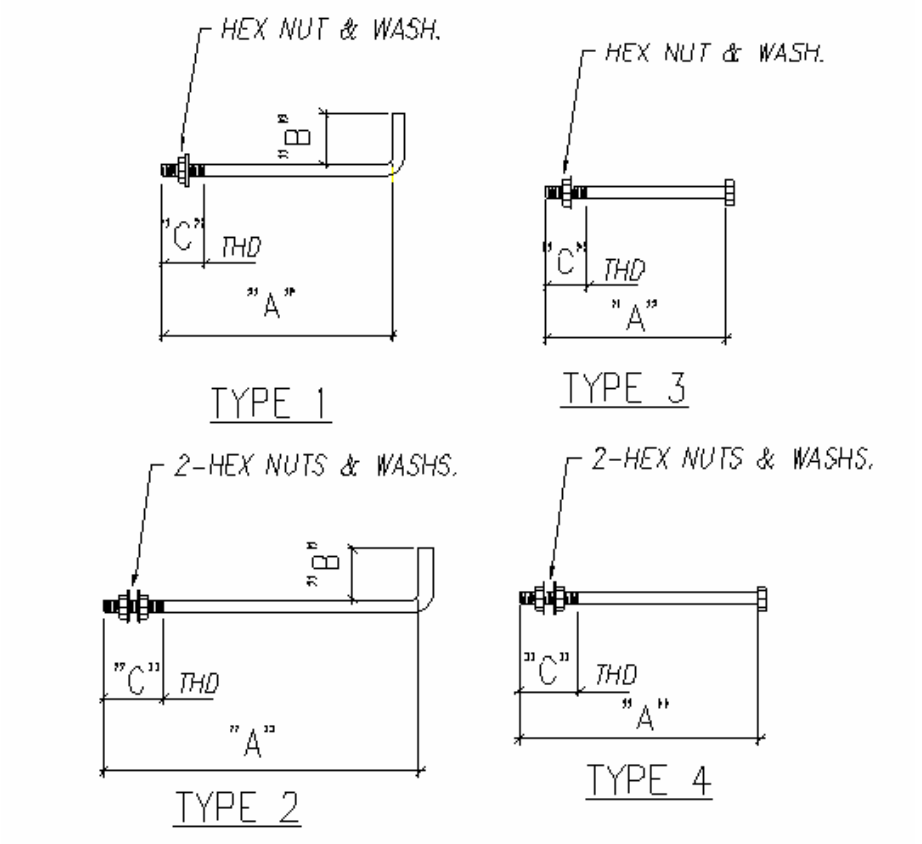
Enter your carrier angle vertical and horizontal leg dimensions and leg thickness. The vertical offset dimension will default to the angle thickness, but you can over-ride it.

Angle Dimensions

Enter the angle size used as your frame. Enter the angle thickness, horizontal leg and vertical leg.

Anchor Bolt Details

SSDCP Manual

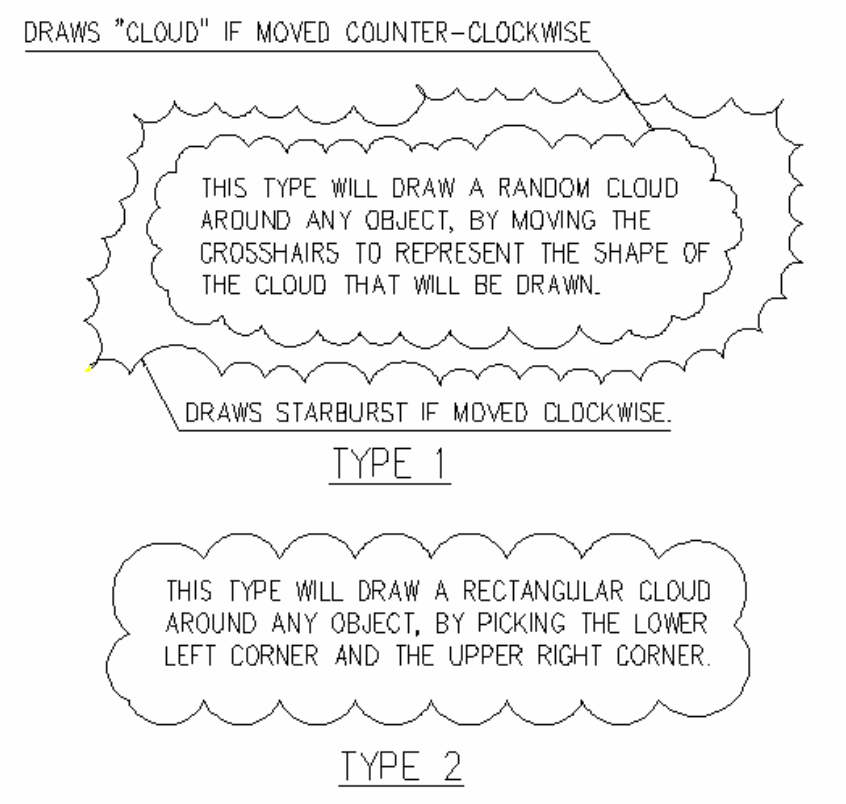


Draw Box

Draw a box by picking a point and dragging to size desired.

Draw Cloud

SSDCP Manual

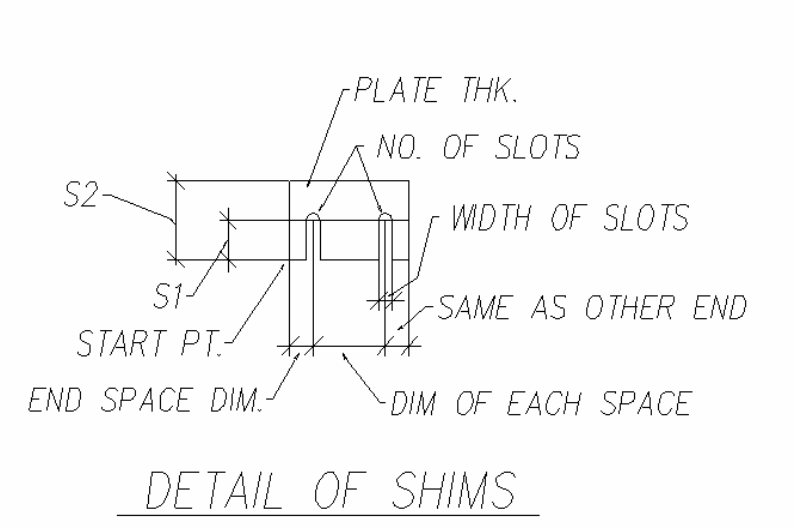

DRAWS "CLOUD" IF MOVED COUNTER-CLOCKWISE
THIS TYPE WILL DRAW A RANDOM CLOUD AROUND ANY OBJECT, BY MOVING THE CROSSHAIRS TO REPRESENT THE SHAPE OF THE CLOUD THAT WILL BE DRAWN.
DRAWS STARBURST IF MOVED CLOCKWISE.
TYPE 1
THIS TYPE WILL DRAW A RECTANGULAR CLOUD AROUND ANY OBJECT, BY PICKING THE LOWER LEFT CORNER AND THE UPPER RIGHT CORNER.
TYPE 2

Draw Arcs with Dimensions

Allows the user to drawn an arc and add dimensions OR to dimension a pre-drawn arc. The routine allows for choices to add arc, chord, mid-ordinate, radius and degree dimensions.

Draw Shims

SSDCP Manual

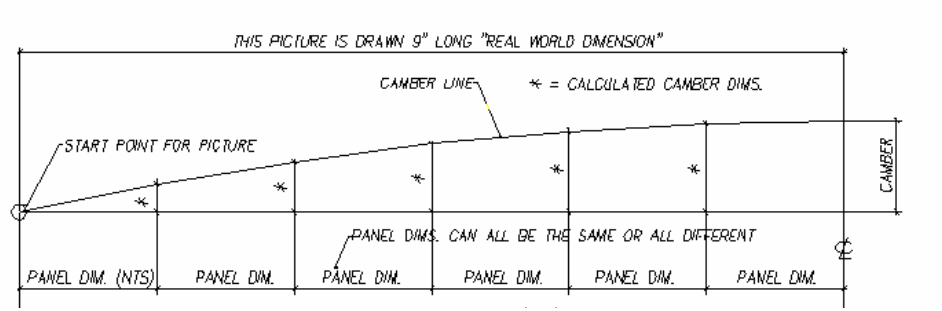


Draw Studs
This routine will draw headed studs on existing details.

Draw Expansion Bolts
This routine will draw expansion bolts in existing sections.

Blow Up Detail
This routine allows the user to scale any existing detail or entity.

Camber Diagram



SSDCP Manual

Miscellaneous Holes

Draw Miscellaneous Holes

Round Hole

This routine will place a round hole where the user selects

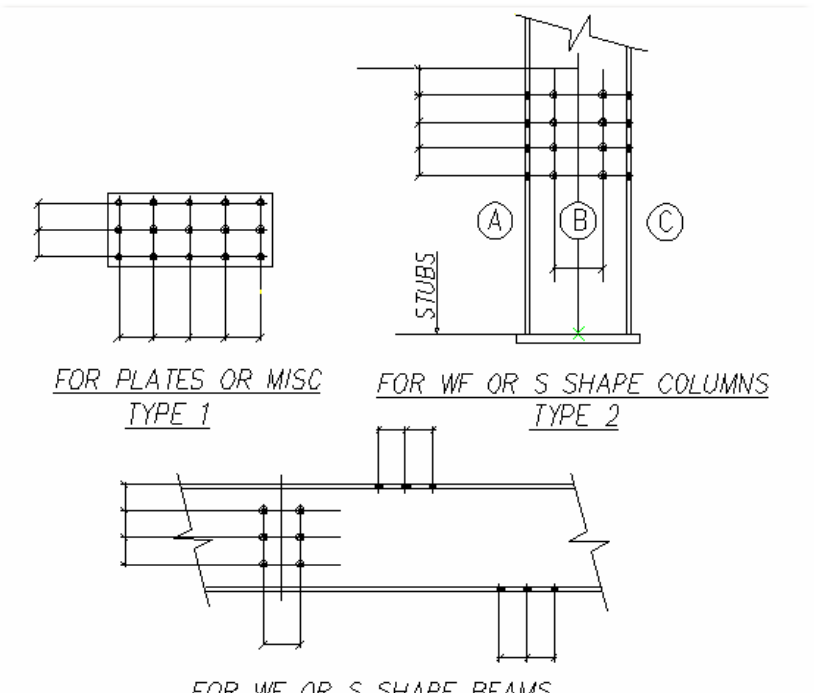
Slots

This routine will draw a slot. User will input height and width in addition to direction of the slot.

Flange Hole

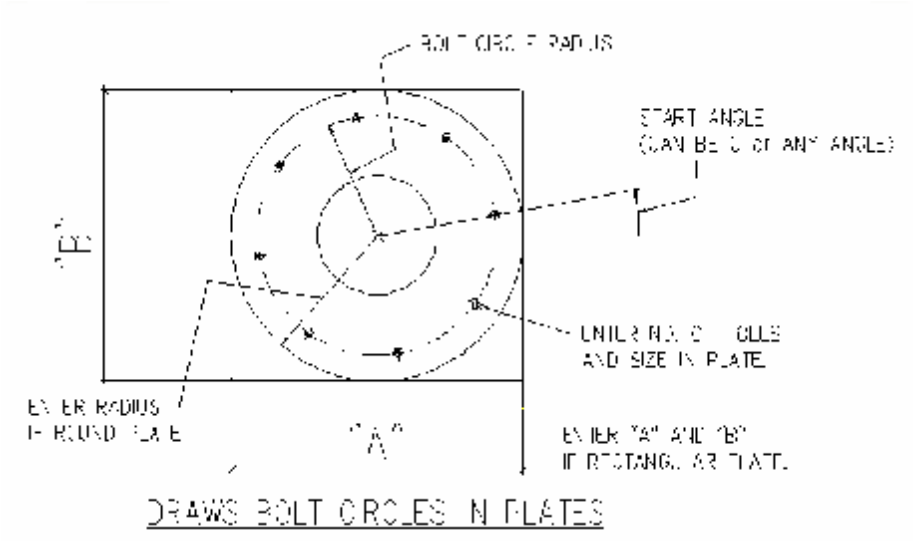
This routine will draw a flange hole based on the user selecting two points or entering flange thickness.

Add Holes to Details



SSDCP Manual

Draw Bolt Circle



Text (Change or Edit)

Change Text

Runs the AutoCAD DDEDIT command

Text Height

Allows the user to change text heights by selecting or using a window crossing.

Text Style

Allows the user to change text style.

Choices are Simplex, Outline, Bold, Romans, Italicc or a style not listed.
Note that if the style is not listed, the user must know the style name.

Text on Arc

Allows the user to either add a dimension or text on an arc line.
Note the arc line must already be drawn.

Blow Up Text to Read

Allows the user to pick any text and it will increase the size for reading.

Cross Hair Angle

Reset to 0 –90

Resets the crosshair angle to 0 and 90 degrees

SSDCP Manual

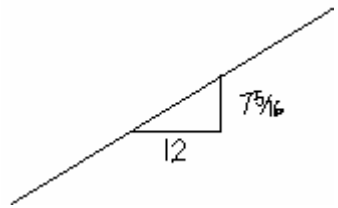
Leaders for Holes or Text

Runs a routine to add either “Hole size” or “slot size” notes with a leader.

Bevels / Lines

Draw Bevel Figure

Allows the user to add the bevel of any selected line by picking on the line.



Rotate to Bevel

Allows the user to rotate entities to any angle

Draw Sloping Line

Allows the user to draw any line based on user input of an angle

Trim Multi Lines

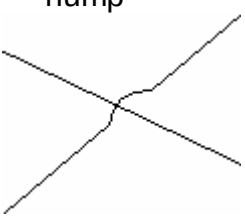
Allows the user to trim multiple lines at once

Extend Multi Lines

Allows the user to extend multiple lines at once

Hump Over Line

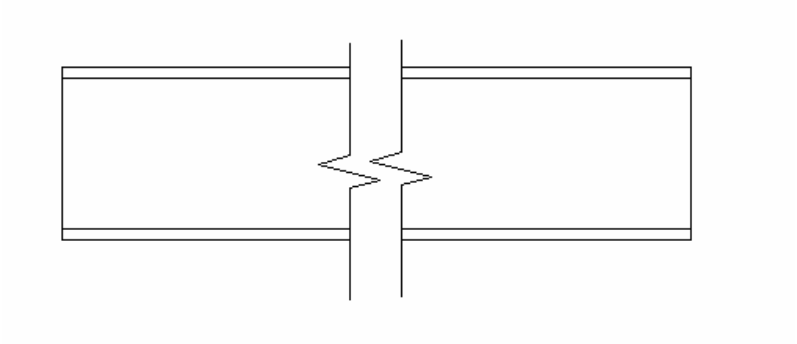
Allows the user to break a line that is crossing another line and add a “hump”



Break Material

Allows the user to create a break line on any material

SSDCP Manual



Break Short Line

This routine will take "one short line" and change it into a dotted line with only "one" break point.

Change Pline Width

Allows the user to change pline widths of existing plines.

CALCULATOR

These are a group of small routines that will aid the detailer in calculations for triangles, circles, weld loads and other helpful utilities.

Triangles
Multiply
Divide
Add/Subtract
Circles
Divide Line
Super Add
Add Real Numbers
Weld Loads
Length Sloping Stiffener
Conversions
- D/M/S to Decimal Degree
- D/M/S to Bevel
- Decimal Degree to Bevel
- Metrics

SSDCP Manual

RESET / CONVERT / FIND

Reset SSDCP Layers and Dimvars

This will set the current drawing to all standard SSDCP layers, dimcars and text styles.

Convert CVSpro Drawings

IMPORTANT NOTE:
Before running this program, you "must" add the layers and dimvars to this drawing first. If you have "not" done this, cancel this program and select "reset layers and dimvars" from the pulldown to do this. Then run this program.

.

This program is a utility to convert drawings produced by the CVSPro detailing software to a format that the SSDCP programs can work with.

.

The program will change the text style to SSDCP, the text height to 0.125, the text width to 0.7, add a foot mark when required and convert all fractions to the prime+character format. These changes are required so that the Cadvantage details will look like details produced with the SSDCP programs and ALL SSDCP programs will work on these "converted" details.

.

The first thing you will be asked to do is to select the portions of the drawing you want to convert to the SSDCP format. You can accomplish this by putting a window around the items you want converted. We suggest that you EXCLUDE all shipping marks, the title block, and the bill of material from this selection set. These items are not used by the SSDCP programs and selecting them will only slow down the conversion process.
You may use "ADD or REMOVE" while selecting items to convert.

Convert SDS 2 Drawings

This program is a utility to convert drawings produced by the SDS2 detailing program to a format that the SSDCP programs can work with.

The program will change the text style to SSDCP, the text height to 0.125", the text width to 0.8, add a foot mark when required and convert all fractions to the prime+character format. These changes are required so that the SDS2 details will look like details produced with the SSDCP programs.

The first thing you will be asked to do is to select the portions of the drawing you want to

SSDCP Manual

.

***** WARNING *****

If you chose to convert the bill of material, you will have several things to manually change after the conversion process. First you will have to reposition some of the text to place it back in the appropriate columns. Then you will need to delete the footmark, which the conversion process adds to some of the piece marks.